


# Stormwater Runoff and Erosion Control for Local Elected Officials

 New York State  
Department of Environmental Conservation



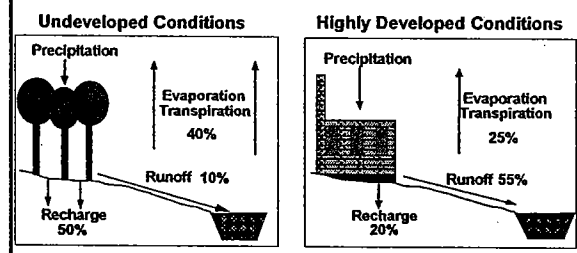
  
University at Buffalo  
State University of New York  
Center for Integrated Waste Management

## Major Program Topics

- Impacts of Stormwater Runoff
- The Regulatory Context
- Community Planning & Watershed Protection
- Regulatory Applications & Field Practices
- Sources of Assistance

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**Stormwater runoff is a natural part of the hydrologic cycle ... but as land use changes, runoff can increase by 45%, resulting in erosion, pollutant transport, sedimentation, loss of aquatic habitat, and other damages.**

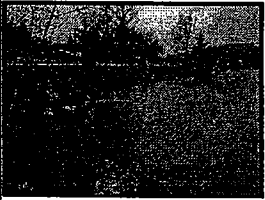


### Erosion

Property Damage

Rebuilding of Roads





### Sedimentation

Damage to Aquatic Habitats

Contamination of Drinking Water

The U.S. loses 600 million tons of sediment per year. That is enough to cover more than 400 football fields per day to a depth of 1 foot.

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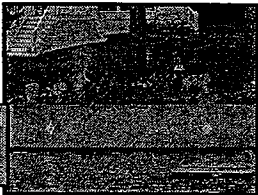

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### Pollutant Transport

Fertilizers and Pesticides

### Automotive By Products

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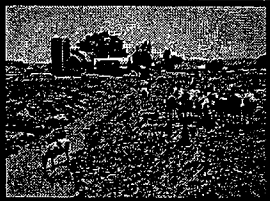
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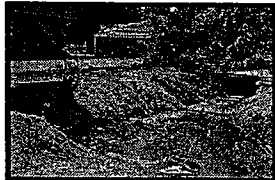
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### Pollutant Transport

Animal Droppings

May contain disease-causing microorganisms (e.g. Cryptosporidium & Giardia)





### Other Debris

Can cause physical impediments to flood control and wildlife movement

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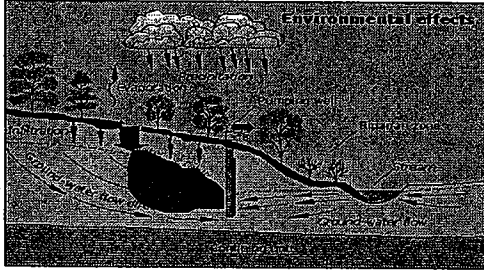
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## Ground & Surface Water Contamination



- Approximately 6 million New Yorkers use ground water as their drinking water source
- About 3% of the public water supply wells in NYS have been closed or abandoned due to pollution

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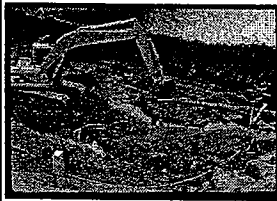
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## Deposition

Infrastructure  
Damage



Costly  
Dredging

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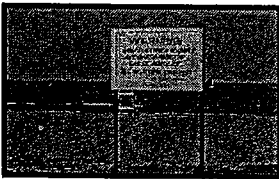
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## Loss of Economic and Recreational Resources

Fishing  
Restrictions



Beach  
Closures

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## Potential Liability

**Localities may face liability from failure to act to properly handle stormwater...**



- Action to recover damages from private property losses;
- Civil Liability to State or Federal regulatory action;
- Citizen Suits under Section 505 of the federal Clean Water Act that could result in significant penalties. (up to \$25,000/day + costs of litigation)

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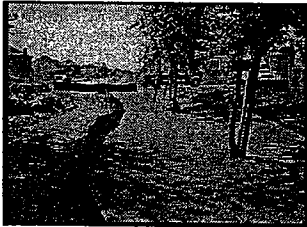
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**Local stormwater control can greatly reduce the environmental, economic, and public health impacts**

### Benefits include:

- Sustainable development
- Savings from loss prevention
- Enhanced property values
- Improved quality of life



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## The Context for Stormwater Regulation

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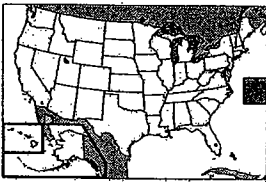
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- Federal Clean Water Act
- EPA Stormwater Regulations - Phase I / Phase II
- Title 40 Code of Federal Regulations (CFR) Parts 122-124

- NYS State Pollutant Discharge Elimination System (SPDES)
- DEC Regulations 6NYCRR
- DEC is "permitting agency"

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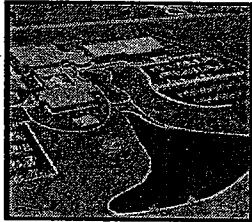
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## Phase I Stormwater Regulations

Phase I regulations include such industrial activities as:

- Manufacturing
- Transportation
- Landfills
- Certain WWT facilities
- Large MS4's
- Large construction sites (greater than 5 acres)



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## What is an MS4?

MS4 = Municipal Separate Sewer System

"A conveyance or system of conveyances owned by a State, City, Town, Village, or other public entity that discharges to the Waters of the United States and is:

- designed or used to collect or convey stormwater (includes gutters, pipes, ditches)
- not a combined sewer
- not part of a Publicly Owned Treatment Works (i.e. sewage treatment plant)"

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## Phase II Stormwater Regulations...

automatically cover two major areas:

1. "Operators" of small **MS4s** located in "urbanized areas";
2. "Operators" of **small construction** activities that disturb greater than 1 and less than 5 acres of land

**What are the basic responsibilities of the operators?**

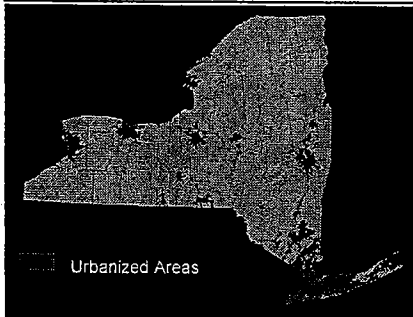
1. Control of stormwater from small MS4s
2. On-site management of stormwater from small construction projects

**How will these responsibilities be accomplished?**

1. Operators to develop comprehensive stormwater management plans and submit to DEC
2. Operators to submit Notice of Intent to DEC and comply with local or other regulations

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## New York's MS4's



- 450 Automatic (within urban areas)
- 24 potential (outside urbanized areas)

## MS4 Program Requirements

**MS4 operators must implement a stormwater management program that:**

- Contains the six minimum control measures.
- Lists the approved Best Management Practices (BMPs)
- Sets forth measurable goals, and
- Provides for annual reporting.
- ✓ DEC notified regulated small MS4s
- ✓ All small MS4's have filed for permit coverage with DEC.



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## Six Minimum Measures of an MS4 Stormwater Management Program

1. Public education and outreach
2. Public Participation & Involvement
3. Illicit Discharge Detection and Elimination
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management in New Development and Redevelopment
6. Pollution Prevention & Good Housekeeping of Municipal Operations

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## Community Planning and Land Use Regulation

Local Government Role

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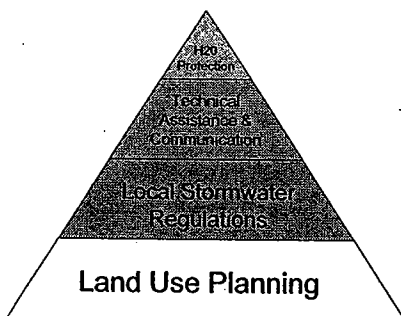
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## Developing a Process for Water Quality Protection



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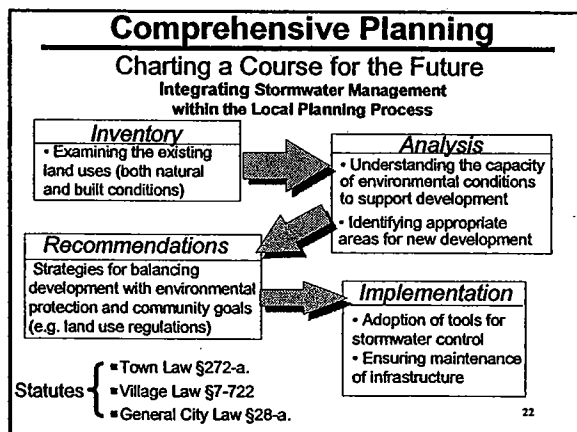
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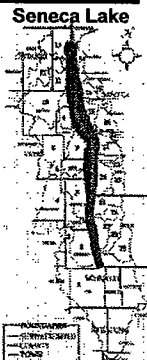
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## Watershed Planning

### May Include Opportunities for Intermunicipal Cooperation

- **Watersheds are shared resources**
  - Identifies common issues & goals
  - Develops partnerships
  - Creates efficiency in implementing solutions
  - Helps expand potential funding sources



**Seneca Lake**

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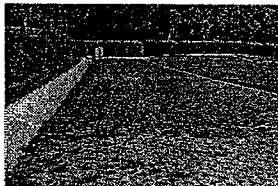
## Zoning

### Provides a structure for regulating the impacts of stormwater

- Construction Standards
- Design Guidelines
- Performance Criteria
- Best Management Practices
- Special Use Permit
  - General City Law §27-b
  - Town Law §274-b
  - Village Law §7-725-b

**Zoning Enabling Statutes**

General City Law §20  
Town Law §261  
Village Law §7-700



- Percentage of pervious surface
- Parking
- Landscaping

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## Increased runoff from increasing impervious surfaces

SOURCES OF ANNUAL STREAMFLOWS FROM 1,000 ACRE AREA WITH SINGLE LAND USE					
Land Use	Percent Runoff	Streamflow (million gallons)			
		Lawn Runoff	Forest/Cropland Runoff	Sub-surface Flow	Total Flow
Forest (5% impervious)	6	--	144	217	367
2 Acre Lot SF Run (6% impervious)	68	135	--	205	408
1 Acre Lot SF Run (12% impervious)	137	127	--	192	456
0.25 Acre Lot SF Run (25% impervious)	285	108	--	163	556
Shopping Center	1,025	8	--	25	1,058

Source: Camp Dresser McKee - Bull Creek Watershed Study

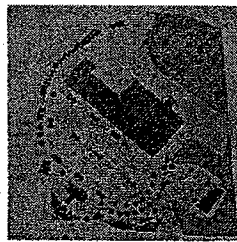
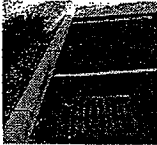
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## Site Plan Review

Provides an opportunity to review components of stormwater management

Site Plan Review regulations must:

- Specify the information to be included on site plans submitted for approval
- Specify the "elements" to be reviewed (e.g. drainage; parking)



### Statutes

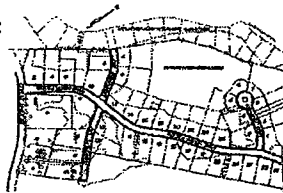
General City Law §27-a  
Town Law §274-a  
Village Law §7-725-a

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## Subdivision Review

Reviews design & improvements:

- ✓ Configuration of lots
- ✓ Construction of streets and sidewalks
- ✓ Adequacy of drainage systems



### Statutes

General City Law §32 and §33  
Town Law §276 and §277  
Village Law §7-728 and §7-730

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## Cluster Review

Lot sizes can be modified to provide an alternative method for the layout, configuration and design of lots in order to preserve open lands.

✓Identifies options which use the natural systems to aid stormwater management.

Development located within suitable areas

Forest Land Undisturbed

✓Reduces percentage of impervious surface

Protection of Stream Corridor

### Statutes

Village Law §7-738  
Town Law §278  
General City Law §37



Some regulatory topics to be considered

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## Integrating Enforcement Mechanisms within Land Use Tools

The Code Enforcement Officer can play a significant role in ensuring the completion of improvements and ongoing compliance with the law

- Enforce conditions of approval
- Conduct inspections to ensure proper installation
- Verify compliance with NYS Uniform Code
- Issue notice of violations



The powers and duties of the enforcement officer should be spelled out in the local law or ordinance

### How can we be sure the required storm-water improvements are installed?

If the improvement will not be installed prior to issuance of a certificate of occupancy, get a security agreement to ensure funds will be available for later installation



Letter of Credit



Cash In Escrow



Performance Bond

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### Who will own, operate and maintain stormwater facilities?

Stormwater facilities may be held in private ownership OR dedicated to the municipality

✓ In either case, local regulations should specify the procedures and standards to be met



Towns may create *drainage districts* in which the costs of maintaining stormwater facilities are affixed to properties in specific areas

Town Law, Articles 12, 12-A, 12-C

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### Planning for Long-Term Stormwater Management

**Establish mechanisms for maintenance of stormwater systems**

Identify:

- Appropriate Management Practices
- Schedules for clean out
- Responsible parties
- Capital Planning Items
  - Budgeting for equipment needs



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## **Functional Applications and Practices**

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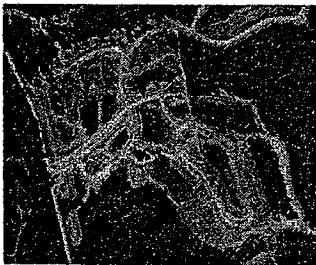
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### **Site-Specific Stormwater Control**



#### **Basic Principles**

1. Diverting run-off
2. Stabilizing Soil
3. Controlling Sediment

Applied Before, During, and After Construction 35

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### **Diverting Run-off**



Swale and  
Check Dams

- Surface water flow is controlled
- Erosion is reduced
- Sediment and pollutants become settled

Retention Pond



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## Stabilizing Soil

### Seeding of Exposed Surfaces



Use of geotextiles

Photo source: Enhance

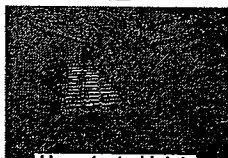
### Protection of Existing Vegetation



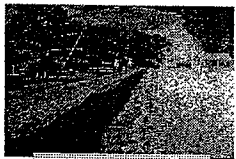
## Controlling Sediment



Protected Inlets



Unprotected Inlet



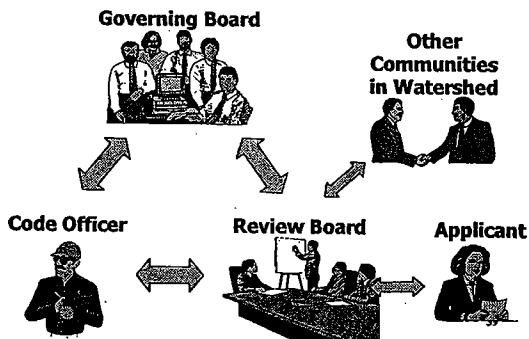
Installing Silt Fence



Establishing Vegetation During Construction

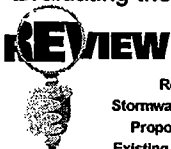
## Governmental Coordination

### Open Communication Process



## Technical Assistance

### Evaluating the Stormwater Management Plan



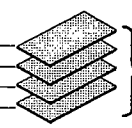
**REVIEW**

Re-Vegetation

Stormwater Facilities

Proposed Grading

Existing Topography



A typical stormwater plan contains several layers of information

**Utilize Available Resources**

- ✓ Municipal Engineer
- ✓ County Planning Agency
- ✓ Soil & Water Conservation District

**Costs & Responsibilities for Project Review**

- ✓ Cash in Escrow
- ✓ Pre-Established Fees
- ✓ Role of Municipal Engineer

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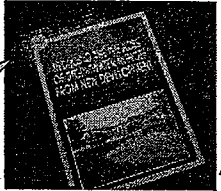
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## Stormwater Management Technical Assistance

- DEC to foster development of regional teams
- Purpose - Assist municipalities develop a stormwater management program that meets Federal and State requirements and local needs
- Clearinghouse for information, training, technical assistance, tools

Contains  
Model Stormwater and Erosion  
Control Regulations for Local  
Governments



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## Sources of Assistance

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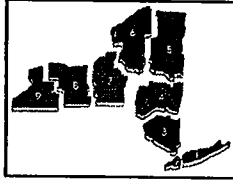
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## DEC Regional Contacts for Stormwater

Region 1  
William Spitz, Regional Water Manager  
631-444-0405



### DEC State Office Contacts

Gerard R. Chartier, P.E.  
Bureau of Watershed Management  
518-457-8961  
grcharti@gw.dec.state.ny.us  
(Nonpoint Source Pollution)

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## Publications

- NY Guidelines for Urban Erosion and Sediment Control
- Reducing the Impacts of Stormwater Runoff from New Developments

both available from:

Empire State Chapter SWCS  
PO Box 1686  
Syracuse, NY 13201-1686

- New York Stormwater Design Manual, NYS DEC - although written for practitioners, Project Review Board members should be familiar with the content.

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## Agency Contacts

- NYS Dept. of Environmental Conservation (DEC)  
[www.dec.state.ny.us/website/dow/mainpage.htm](http://www.dec.state.ny.us/website/dow/mainpage.htm)
- US Environmental Protection Agency  
[www.epa.gov/owm/sw/phase2](http://www.epa.gov/owm/sw/phase2)
- NYS Department of State (DOS)  
[www.dos.state.ny.us/fgss/localgovt.html](http://www.dos.state.ny.us/fgss/localgovt.html)
- NYS Soil & Water Conservation Districts  
[www.ny.nacdn.net/](http://www.ny.nacdn.net/)
- County & Regional Planning Agencies  
(see DOS website for complete list)
- NYS Association of Towns  
[www.nytowns.org](http://www.nytowns.org)
- NYS Conference of Mayors  
[www.nycom.org/home.html](http://www.nycom.org/home.html)
- NYS Dept. of Transportation  
[www.dot.state.ny.us/eab/bmp.html](http://www.dot.state.ny.us/eab/bmp.html)
- Cornell Local Roads Program  
[www.osp.cornell.edu/VPR/Outreach/programs/LocalRoads.html](http://www.osp.cornell.edu/VPR/Outreach/programs/LocalRoads.html)

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## Professional Associations & Training

- Stormwater Manager's Resource Center  
[www.stormwatercenter.net](http://www.stormwatercenter.net)
- Center for Watershed Protection  
[www.cwp.org](http://www.cwp.org)
- International Erosion Control Association  
[www.ieca.org](http://www.ieca.org)
- Syracuse University Continuing Education - Stormwater Management Program  
[www.suce.syr.edu/seminars/swmp/](http://www.suce.syr.edu/seminars/swmp/)
- Non-point Education for Municipal Officials  
[www.nemo.uconn.edu](http://www.nemo.uconn.edu)
- NYS Floodplain and Stormwater Managers Association  
[www.nysflood.org](http://www.nysflood.org) (under development) <sup>46</sup>

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## Funding

- NonAgricultural Nonpoint Source Projects
  - Clean Water/ Clean Air Bond Act
  - Water Quality Improvement and Environmental Protection Fund (EPF)
  - Clean Water State Revolving Fund
- Funding Sources and Tips on Grant Applications for Watershed Protection and Restoration  
([www.dec.state.ny.us/website/dow/fundingwebpg.html](http://www.dec.state.ny.us/website/dow/fundingwebpg.html))
- EPF Local Waterfront Revitalization Program  
New York State Department of State  
*Division of Coastal Resources*  
([www.dos.state.ny.us/cstl/epfba2.html](http://www.dos.state.ny.us/cstl/epfba2.html))  
Steven Ridler  
41 State Street, Albany, NY 12231-0001  
Phone: (518) 473-3942; Fax: (518) 473-2464  
E-mail: [sridler@dos.state.ny.us](mailto:sridler@dos.state.ny.us) <sup>47</sup>

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2. **Minimum SWPPP Components** SWPPPs prepared pursuant to this general permit shall present fully designed and engineered stormwater management practices with all necessary maps, plans and construction drawings. The SWPPP must, at a minimum, include the following:

a. For all construction activities subject to this general permit -

- (1). provide background information about the scope of the project, including the location, type and size of project.
- (2). provide a site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map should show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s), wetlands and drainage patterns that could be affected by the construction activity; existing and final slopes; locations of off-site material, waste, borrow or equipment storage areas; and location(s) of the stormwater discharge(s);
- (3). provide a description of the soil(s) present at the site;
- (4). provide a construction phasing plan describing the intended sequence of construction activities, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance. Consistent with the New York Guidelines for Urban Erosion and Sediment Control, there shall not be more than five (5) acres of disturbed soil at any one time without prior written approval from the Department;
- (5). provide a description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in the storm water discharges;
- (6). provide a description of construction and waste materials expected to be stored on-site with updates as appropriate, and a description of controls to reduce pollutants from these materials including storage practices to minimize exposure of the materials to storm water, and spill prevention and response;
- (7). describe the temporary and permanent structural and vegetative measures to be used for soil stabilization, runoff control and sediment control for each stage of the project from initial land

clearing and grubbing to project close-out;

(8) identify and show on a site map/construction drawing(s) the specific location(s), size(s), and length(s) of each erosion and sediment control practice;

(9) provide the dimensions, material specifications and installation details for all erosion and sediment control practices, including the siting and sizing of any temporary sediment basins;

(10) identify temporary practices that will be converted to permanent control measures;

(11) provide an implementation schedule for staging temporary erosion and sediment control practices, including the timing of initial placement and the duration that each practice should remain in place;

(12) provide a maintenance schedule to ensure continuous and effective operation of the erosion and sediment control practices;

(13) provide the names(s) of the receiving water(s);

(14) provide a delineation of SWPPP implementation responsibilities for each part of the site;

(15) provide a description of structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree attainable; and

(16) provide any existing data that describes the stormwater runoff characteristics at the site.

b. For construction activities meeting Condition A, B or C in Part III.A.1.b.

- (1) provide all the information required in Parts III.D.2.a.1 - 16 above;
- (2) provide a description of each post-construction stormwater control practice;
- (3) identify and show on a site map/construction drawing(s) the specific location(s) and size(s) of each post-construction stormwater control practice;
- (4) provide a hydrologic and hydraulic analysis for all structural components of the stormwater control system for the applicable design storms;
- (5) provide a comparison of post-development stormwater runoff conditions with pre-development conditions;
- (6) provide the dimensions, material specifications and installation details for each post-construction stormwater control practice;
- (7) provide a maintenance schedule to ensure continuous and effective operation of each post-construction stormwater control practice.

## Chapter 165, EROSION AND SEDIMENT CONTROL

[HISTORY: Adopted by the Town Board of the Town of Yorktown 4-2-1991 by L.L. No. 17-1991. Amendments noted where applicable.]

### GENERAL REFERENCES

Conservation areas -- [See Ch. 140.](#)  
Environmental quality review -- [See Ch. 161.](#)  
Flood damage prevention -- [See Ch. 175.](#)  
Freshwater wetlands -- [See Ch. 178.](#)  
Land development -- [See Ch. 195.](#)  
Zoning -- [See Ch. 300.](#)

## ARTICLE I, General Provisions; Terminology

### § 165-1. Enabling authority.

This chapter is enacted pursuant to the authority of the town to promote the public health, safety and general welfare of its citizenry under § 10 of the New York State Municipal Home Rule Law and Article 36 of the New York State Environmental Conservation Law and any and all applicable laws, rules and regulations of the State of New York, and nothing herein shall be deemed to conflict with any such laws, rules or regulations.

### § 165-2. Findings and purpose.

A. Findings. The Town Board of the Town of Yorktown hereby finds that:

- (1) Excessive quantities of soil may erode from areas undergoing development for certain uses, including but not limited to the construction of dwelling units, commercial buildings and industrial plants, the building of roads and highways and the construction of recreational facilities;



PART II GENERAL LEGISLATION

Chapter 165, EROSION AND SEDIMENT CONTROL

ARTICLE I, General Provisions; Terminology

§ 165-2. Findings and purpose.

- (2) The washing, blowing and deposition of eroded soil across and upon roadways endangers the health and safety of users thereof by decreasing visibility and reducing traction of road vehicles;
- (3) Soil erosion necessitates the costly cleaning of gullies and repair of washed-out fills and embankment;
- (4) Sediment from erosion clogs culverts, fills ditches and pollutes and silts rivers, streams, lakes, ponds and reservoirs;
- (5) Sediment limits the use of water and watercourses for some beneficial purposes, promotes the growth of undesirable aquatic weeds, destroys fish and other desirable aquatic life and is costly and difficult to remove; and
- (6) Sediment reduces the channel capacity of watercourses and increases the likelihood of flooding.

B. Purpose. The Town Board therefore declares that the purpose of this chapter is to safeguard persons, protect property, prevent damage to the environment and promote the public welfare by guiding, regulating and controlling the design, construction, use and maintenance of any development or other activity which disturbs or breaks the surface of soil or results in the movement of earth on land situated in the town.

**§ 165-3. Word usage.**

Unless specifically defined below, words and phrases used in this chapter shall be interpreted to have the meaning they have in common English usage, to promote the purpose set forth in § 165-2B and to provide reasonable application of this chapter. Words used in the present tense include the future, and the plural includes the singular.

**§ 165-4. Definitions.**

As used herein, the following terms shall have the meanings indicated:

ADDITION -- Any work on an existing structure which changes the external dimensions of such structure.

ADJACENT PARCEL -- All contiguous parcels to the subject parcel, as well as all parcels downstream of the subject parcel within the natural or actual drainageway or watercourse.

AGENT -- Any town official who is designated to administer and enforce this chapter.

ALTERATION -- Any work on an existing structure which affects the interior of the structure but does not change its external dimensions.

APPEAL -- A request to the Town Board for a waiver of the permitting authority's interpretation of any provision of this chapter or a request for a variance.



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**BEST MANAGEMENT PRACTICES (BMP)** -- The standards established in:

- A. The series of manuals prepared, published and occasionally amended by Westchester County which consists of various volumes an Best Management Practices for certain described activities and, specifically, the volume for construction related activities;
- B. The USDA Soils Conservation Manual, as amended;
- C. The New York Guidelines for Urban Erosion and Sediment Control, dated March 1989, as amended; and
- D. The DEC Division of Water TOGS § 5.1.8, as amended.

**BUILDING INSPECTOR** -- Any person employed full-time as the Building Inspector or his assistant.

**BUILDING PERMIT** -- A permit issued by the municipality for the construction, erection or alteration of a structure or building.

**CERTIFICATION** -- Formal attestation that the specific inspections and tests, where required, have been performed, and that such tests comply with applicable requirements of this chapter.

**CLEARING** -- The act of clearing is the cutting of trees, shrubs, bushes, windfalls and other vegetation. [Added 4-2-2002 by L.L. No. 1-2002]

**CUBIC YARDS** -- The measurement used to determine the amount of material in excavation and/or fill measured by the method of average end areas.

**DEVELOPMENT** -- Any man-made change to unimproved real estate, including but not limited to building or other structures, mining, dredging, filling, grading, paving, removal of vegetation, excavation, blasting or drilling operations.

**ENVIRONMENTAL CODE INSPECTOR** -- The duly appointed Town official charged with the duty of inspecting and enforcing the environmental laws of the Town of Yorktown, including but not limited to Chapter 178, Freshwater Wetlands, of the Town Code, and this chapter.

**EROSION AND SEDIMENT-CONTROL PLAN** -- A plan or set of plans prepared by a New York State licensed engineer, architect, landscape architect or by the Westchester County Soil and Water Conservation District, indicating the specific measures and sequencing to be used in controlling sediment and erosion on a development site both during and after construction.

**EXCAVATION** -- Any act by which organic matter, earth, sand, gravel, rock or any other similar material is cut into, dug, quarried, uncovered, removed, displaced or spread, and shall include the conditions resulting therefrom.

**EXISTING GRADE** -- The elevation of the existing ground surface prior to excavation or filling.

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**FILL** -- Any act by which earth, sand, gravel, rock or any other material is deposited, placed, replaced, dumped, transported or moved by man to a new location, and shall include the conditions resulting therefrom.

**FINAL GRADE** -- The elevation of the ground or pavement surface after the grading work is completed in accordance with the approved plan.

**FLOODWAY** -- The channel of a river, stream, brook or other watercourse and the adjacent land areas that must be reserved in order to convey the one-hundred-year flood without cumulatively increasing the water surface elevation more than one foot, as shown on the Federal Emergency Management Agency Floodway Maps.

**GRADING** -- A change in topography by human activities. [Amended 4-2-2002 by L.L. No. 1-2002]

**LAND-DISTURBING ACTIVITY** -- Any land change which may result in soil erosion from water or wind and the movement of soil into a watercourse or onto land or increased runoff from waters, including but not limited to clearing, clear cutting, grading, excavating and filling of land. [Amended 4-2-2002 by L.L. No. 1-2002]

**NATURAL DRAINAGE** -- Pattern of the movement of water such as channels formed in the existing surface topography of the land prior to changes made by human activities. [Amended 4-2-2002 by L.L. No. 1-2002]

**PARCEL** -- All contiguous land under one ownership.

**PERMANENT VEGETATION** -- Mature ground cover to control soil erosion satisfactorily and to survive severe weather conditions.

**PERMITTEE** -- Any person to whom a permit is issued.

**PERMITTING AUTHORITY** -- The administrative board or public official empowered to grant permits under this chapter as follows:

A. The duly appointed Planning Board shall act as permitting authority upon all applications required to be made hereunder in conjunction with an application for site plan or parking plan or subdivision approval over which the Planning Board otherwise has jurisdiction under the Town Code of the Town of Yorktown.

B. The Town Board of the Town of Yorktown shall act as the permitting authority upon all applications required to be made hereunder in conjunction with an application made before the Board pursuant to any other chapter of the Town Code of the Town of Yorktown and for site plan, parking plan or subdivision approvals which are not subject to another permitting authority hereunder.

C. The Building inspector shall act as permitting authority on all applications involving a building permit and for which no previous application and/or permit hereunder has been made or issued in conjunction with a site plan or subdivision application and/or approval.

D. The Town Engineer or his duly appointed representative shall act as permitting authority for all permit applications relating to activities that do not require subdivision, site plan approval or a building permit and that involve the clearing, removal or regrading of less than 10,000 square feet of area.

**PERSON** -- Any individual, firm or corporation, public or private, the State of New York and its agencies or political subdivisions and the United States of America, its agencies and instrumentalities and any agent, servant, officer or employee of any of the foregoing.

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**REMOVAL** -- Cutting vegetation to the ground or leaving it as stumpage, complete extraction or killing by spraying.

**REVIEWING AGENCIES** -- The duly appointed Conservation Board of the Town of Yorktown, Town Engineer, Planning Board, Town Board and the Westchester County Soil and Water Conservation District.

**SEDIMENT BARRIER** -- A temporary barrier of fixed straw bales and/or other material with a life expectancy of six months or less, installed across or at the bottom of a slope in development sites and disturbed soil areas.

**SITE DEVELOPMENT** -- Altering terrain and/or vegetation and any type of construction.

**SITE PLAN** -- The map or drawing of a proposed development which is submitted to the town for consideration and approval.

**SOIL STABILIZATION** -- Measures which protect soil from the erosive forces of rain, flowing water and wind and includes, but is not limited to, vegetative establishment, mulching and the early application of gravel or stone base on areas to be paved.

**START OF CONSTRUCTION** -- The first land-disturbing activity associated with a development, such as clearing, grading and filling; installation of streets and walkways; excavation for basements, footings, piers or foundations; erection of temporary forms; and installation of accessory buildings, such as garages.

**STRIPPING** -- Any activity which removes the vegetative surface cover, including tree removal, clearing and storage or removal of topsoil.

**SUBDIVISION** -- Any tract of land which is divided into two or more habitable building sites or parcels on any site along an existing or proposed street, highway, easement or right-of-way or other means of proposed means of access, road or street, for sale, lease or rent, regardless of whether the sites are to be sold or offered for sale or leased for any period of time, are described by metes and bounds, or by reference to a map or survey of the property or by any other method of description. "Subdivision" also has any meaning it presently has under the laws of the Town of Yorktown.

**TEMPORARY STREAM CROSSING** -- A temporary structural span installed across a watercourse for use by construction traffic. Structures may include, but are not limited to, bridges, pipes, culverts or fords.

**TOWN ENGINEER** -- Any person employed full-time as the Town Engineer or his assistant or any consultant engineer retained to act in his stead.

**TOWN OF YORKTOWN (THE TOWN)** -- Any area within the Town of Yorktown.

**VARIANCE** -- A grant of relief from the requirements of this chapter which permits a person to undertake construction in a manner otherwise prohibited by this chapter where specific enforcement would result in unnecessary hardship by the Town Board.

**WATERCOURSE** -- Any body of water, including but not limited to lakes, ponds, rivers, streams, intermittent streams and bodies of water which are classified by the New York State Department of Environmental Conservation under Part 6 of the New York Code of Rules and Regulations or delineated on the Hydrological Features Map of the Westchester County Environmental Planning Atlas or delineated on the USGS 7.5 Minutes Quadrangle Sheet(s) for the town or any area defined as a "wetlands" or "watercourse" in either Chapter 178, Freshwater Wetlands, or the Freshwater Wetlands and Drainage Law of New York State. <sup>EN</sup>

**WET SEASON** -- The period from October 15 to April 15.

**§ 165-5. General principles.**

The objective of this chapter is to control soil erosion and sedimentation caused by development activities in the town. Measures taken to control erosion and sedimentation shall be adequate to ensure that erosion is controlled utilizing best management practices. The following principles shall apply to all development activities within the town and to the preparation of the submissions required under Article II of this chapter:

- A. Selection of control measures. The selection of erosion and sedimentation control measures shall be based on assessment of the probable frequency of climatic and other events likely to contribute to erosion and on an evaluation of the risks and benefits involved.
- B. Protection of adjacent properties.
  - (1) Properties adjacent to the site of a land disturbance shall be protected from sediment deposition. This may be accomplished in part by preserving a well-vegetated buffer strip around the lower perimeter of the land disturbance by installing perimeter controls such as sediment barriers, filter screens, dikes or sediment basins or by a combination of such measures, as shown on the approved erosion control plan.
  - (2) Vegetated buffer strips may be used alone only where runoff in sheet flow is expected and the location of the proposed construction is such that a vegetated buffer strip of at least 20 feet in width can be provided. If at any time it is found that a vegetated buffer strip alone is ineffective in preventing sediment movement onto adjacent property, additional perimeter controls must be provided.
- C. Cut and fill slopes.
  - (1) Development shall reflect the topography and soils of the site so as to create the least potential for erosion. Areas of steep slopes where high cuts and fills may be required shall be avoided wherever possible, and natural contours shall be followed as closely as possible.
  - (2) In the design of cut and fill slopes, consideration must be given to the length and steepness of the slope, the soil type, upslope drainage area, groundwater conditions and other applicable factors. Slopes which are found to be eroding excessively must be provided with additional measures until the problem is corrected. Fills shall not encroach on areas designated as buffer under Chapter 178, Freshwater Wetlands or the State's Freshwater Wetlands and Drainage Law unless undertaken under an appropriate permit issued under such regulations. In no case shall fills encroach on constructed channels or floodways or adjacent properties.
- D. Vegetation.
  - (1) Natural vegetation shall be retained and protected wherever possible. A permanent vegetative cover shall be established or denuded areas not otherwise permanently stabilized. Permanent vegetation and related structures shall be installed as soon as practical or within the time specified in the permit. Permanent vegetation shall not be considered established until a ground cover is achieved which, in the opinion of the Town Engineer or his designated agent, is mature and able to control soil erosion satisfactorily and to survive severe weather conditions.
  - (2) The smallest practical area of land shall be exposed for the shortest practical time during development.
- E. Stabilization of denuded areas and soil stockpiles. Adequate barriers to prevent erosion/siltation shall be applied to stockpiled and denuded areas at the end of each day. Permanent or temporary soil stabilization must be applied to denuded areas within two days after final grade is reached on any portion of the site. Soil stabilization must also be applied within two days to denuded areas which may not be at final grade but may remain dormant (undisturbed) for longer than two weeks.
- F. Sediment basins. Sediment basins, silt traps or filters shall be installed and maintained to remove sediment from runoff waters from undergoing development. Structures shall be located to allow access for maintenance purposes.
- G. Timing and stabilization of sediment-trapping measures. Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment on site must be constructed as a first step in grading and must be made functional before upslope land disturbance takes place. Earthen structures, such as dams, dikes and diversions, must be seeded and mulched immediately after completion of construction.

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- H. Stabilization of waterways and outlets. All on-site stormwater conveyance channels and culverts shall be designed and constructed to withstand the expected velocity of flow from a ten-year frequency storm without erosion. Stabilization adequate to prevent erosion must also be provided at the outlets of all pipes and paved channels. Drainageways must be designed to accommodate a one-hundred-year storm event.
- I. Storm sewer inlet protection. All storm sewer inlets which are made operable during construction shall be protected so that sediment-laden water will not enter the conveyance system without first being filtered or otherwise treated to remove sediment. This requirement may be deleted if an adequate sedimentation pond is provided for the project. All sediment shall be removed as necessary for proper operation of the pond.
- J. Working in or crossing watercourse.
- (1) Construction vehicles should be kept out of watercourses to the greatest extent possible. Where channel work is necessary, precautions must be taken to stabilize the work area during construction to minimize erosion. The channel (including bed and banks) must be restabilized at the end of each day once in-channel work has begun. Channel work is not permitted during the wet season or as may be prescribed by the permitting authority.
  - (2) Where a watercourse must be crossed by construction vehicles regularly during construction, a temporary stream crossing must be provided. In the event that any work is conducted in a wetlands, as that term is defined in Chapter 178, Freshwater Wetlands, that chapter shall control.
- K. Stormwater management criteria for controlling off-site erosion.
- (1) Erosion control measures shall be implemented to accommodate the increased runoff caused by changed soil and surface conditions during and after development. Drainageways shall be designed so that the final gradients and the resultant velocities of discharges will not create additional erosion.
  - (2) Stormwater management design will follow the procedures and methodology set forth in the Soil Conservation Service Technical Release No. 55 (TR 55) and the provisions of DEC Division of Water TOGS § 5.1.8, or other method acceptable to the Town Engineer. The permittee shall submit a plan for controlling stormwater runoff based upon the aforementioned manual simultaneously with the site plan, subdivision application or building permit to the permitting authority.
- L. Underground utility construction.
- (1) The construction of underground utility lines involving installation, maintenance or repair which disturbs more than 10,000 square feet shall be subject to the following criteria:
    - (a) No more than 300 feet of trench are to be opened at one time unless approval to open a greater length is granted by the Town Engineer.
    - (b) Where consistent with safety and space considerations, excavated material is to be placed on the uphill side of trenches.
    - (c) Trench dewatering devices shall discharge in a manner which will not adversely affect flowing streams, drainage systems or off-site property.
  - (2) Individual service connections, telephone and electric lines and underground public utility lines under, streets or sidewalks are exempt from the above requirements.
- M. Construction access routes.



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- (1) Wherever construction vehicle access routes intersect paved roads, provisions must be made to minimize the transport of sediment by runoff or vehicle tracking on the paved surface in accordance with the Westchester County Best Management Practices.
  - (2) Where sediment is transported onto a paved road surface, the roads shall be cleaned thoroughly at the end of each day. Sediment shall be removed from roads by shoveling and sweeping and transported to a sediment-control area. Street washing shall be allowed only after sediment is removed in this manner.
- N. Disposition of temporary measures. All temporary erosion and sediment-control measures shall be disposed of within one month after final site stabilization is achieved or after the temporary measures are no longer needed, unless otherwise authorized by the town. Trapped sediment and other disturbed soil areas resulting from the disposition of temporary measures shall be properly removed.
- O. Maintenance. All temporary and permanent erosion and sediment-control practices must be maintained and repaired as needed to assure continued performance of their intended function.
- P. Grading. During grading operations, appropriate measures for dust control shall be exercised. Grading equipment shall not be allowed to enter or cross any watercourse, except in accordance with the terms of the permit issued by the Town Engineer.
- Q. Aesthetics. In the design of erosion control facilities and practices, aesthetics and the requirements of continuing maintenance shall be considered.

## ARTICLE II, Permit Procedure

### § 165-6. Permit required.

- A. Except as otherwise provided in this chapter, no person shall commence or perform any land-disturbing activity not exempted from this section without first obtaining an erosion and sediment control permit from the permitting authority. [Amended 4-2-2002 by L.L. No. 1-2002]
- B. Best management practices, as defined in § 165-4, shall be used as a guide and reference of performance standards in the issuance of all erosion and sediment control permits and for all work done pursuant to Town authority.
- C. Applicants shall also obtain all other permits as required by state, federal and local laws.
- D. The Westchester County Soil and Water Conservation District may be consulted for review and recommendations for all applications for any permits involving any land-disturbing activity which involves construction on slopes in excess of 25%, excavation or fill of 20,000 cubic yards or more of material, is within 100 feet of a watercourse as defined in Chapter 178, Freshwater Wetlands, or within 100 feet of a wetlands as classified by the unified federal definition or for any applications for any permits involving any land-disturbing activities in the Town and a contiguous municipality. If the Westchester County Soil and Water Conservation District fails to make any recommendation within 30 days upon receipt of mailing, such referral shall be deemed to constitute no objection to the application.
- E. The Town Engineer's office, in conjunction with the Building Department and the Environmental Code Officer, shall be charged with the implementation and enforcement of this chapter and any permits issued hereunder.
- F. The clearing of more than 10 trees with a DBH of six inches or greater within a 5,000 square foot area or the cutting of any vegetation in an area in excess of 5,000 square feet within a twelve-month period will require an erosion and sediment control permit. [Added 4-2-2002 by L.L. No. 1-2002]

### § 165-7. Exceptions.

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A permit shall not be required for any of the following activities:

- A. Normal lawn and landscaping maintenance.
- B. Existing nursery and agricultural operations conducted as either a permitted main or accessory, use.
- C. Grading of land in a uniform manner or other land-disturbance activity that is less than 5,000 square feet in area and no more than 20 cubic yards of fill are added or removed from the area, provided that the normal flow of the exterior of the property lines is not altered and, upon completion of the grading, the exposed surfaces are permanently stabilized with vegetation.
- D. Alteration of the exterior of a building and alteration of a building, provided that such exterior alteration does not increase land coverage.
- E. Installation, renovation or replacement of a septic system to serve an existing dwelling or structure(s).
- F. Any emergency activity which is immediately necessary to protection of life, property or natural resources.
- G. The creation of an above-ground pool or garden less than 10,000 square feet on a residential property.

**§ 165-8. Permit application; fee.**

- A. Applications for an erosion and sediment control permit shall be made by the owner of the property or his authorized agent to the following:
  - (1) Town Clerk for all applications to the Town Board;
  - (2) Planning Department for all applications to the Planning Board;
  - (3) Town Engineer's Office for all applications to the Town Engineer; and
  - (4) The Building Department for all applications to the Building Department.
- B. Each application shall bear the name(s) and address(es) of the owner or developer of the site and of any consulting firm retained by the applicant, together with the name of the applicant's principal contact at such firm. Furthermore, each application shall include a certification that any land clearing, construction or development involving the movement of earth shall be in accordance with the plans approved upon issuance of the permit.



C. Fees.

(1) A filing and administrative fee shall be paid as prescribed below:

- (a) Town Engineer administrative permit: \$40.
- (b) Planning Board permit: \$250.
- (c) Town Board permit: \$250.

(2) The fee for a Building Inspector administrative permit is included in the cost of the building permit.

**§ 165-9. Submissions.**

A. Each application for a permit hereunder shall be accompanied by the following information and/or items, except submittals and/or their substantial equivalents as determined by the permitting authority have been or will be in the case of a building inspection application where required by the Building Inspector or in the case of a Town Engineer application where required by the Town Engineer.

- (1) A vicinity map in sufficient detail to easily locate in the field the site for which the permit is sought, including the boundary line and approximate acreage for the site, existing zoning and a legend and scale.
- (2) A plan for controlling stormwater runoff as defined in § 160-5K of this chapter.
- (3) A development plan for the site showing:
  - (a) Existing topography of the site and adjacent land within approximately 100 feet of the boundaries, drawn at no greater than two-foot contour intervals and clearly portraying the conformation and drainage pattern of the area.
  - (b) The location of existing buildings, structures, stone walls, utilities, water bodies, floodplains, drainage facilities, vegetative cover, paved areas, watershed divides, septic systems and walls and other significant natural or man-made features on the site and adjacent land within approximately 100 feet of the boundary.
  - (c) A map and description of the predominant soil types on the site, their location and their limitations for the proposed use.
  - (d) Proposed use of the site, including both present development and planned utilization; areas of excavation, grading and filling; proposed contours, finished grades and street profiles; provisions for storm drainage and including the control of accelerated runoff, with a drainage area map and computations; kinds and locations of utilities; and areas and acreage proposed to be paved, covered, sodded or seeded or vegetatively stabilized.

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- (4) An erosion and sediment-control plan or plans showing:
- (a) All erosion and sediment-control measures necessary to meet the objectives of this chapter throughout all phase of construction and permanently, after completion of development of the site. Depending upon the complexity of the project, the drafting of intermediate erosion and sediment control plans also may be required.
  - (b) Seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application and kind and quality of mulching for both temporary and permanent vegetative control measures.
  - (c) Provisions for maintenance of control facilities, including easements.
  - (d) Identification of the person(s) or entity which will have legal responsibility for maintenance of erosion-control structures and measures after development is completed.
- (5) The proposed phasing of development of the site, including stripping and clearing, rough grading and construction and final grading and landscaping. Phasing shall identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of clearing, installation of temporary sediment-control measures, installation of storm drainage, paving streets and parking areas and establishment of permanent vegetative cover.

B. These submissions shall be prepared in accordance with the standards and requirements contained in the best management practices as defined in § 165-4.

**§ 165-10. Waiver of required submittals.**

The permitting authority may waive specific requirements for the content of submissions upon finding that the information submitted is sufficient to show that the work will comply with the objectives and principles of this chapter. The permitting authority may approve, approve with conditions or disapprove the erosion and sediment control plan.

**§ 165-11. Improvement security.**

The applicant may be required to file with the town a cash erosion-control bond or other improvement security satisfactory to the Town Attorney in an amount deemed sufficient by the permitting authority to cover all costs of improvements, landscaping, maintenance of improvements and landscaping for such period as specified by the town and engineering and inspection costs to cover the cost of failure or repair of improvements installed on the site.

**§ 165-12. Review and approval.**

Each application for an erosion and sediment control permit shall be reviewed and acted upon according to the following procedures:

A. The permitting authority will review each application for an erosion and sediment control permit to determine its completeness and conformance with the provisions of this chapter. The permitting authority, within 30 days of receipt of the application, shall make a determination as to whether an application is complete so that a decision can be made upon the same. The permitting authority, upon receipt of a completed application or upon a determination of completion, may refer the completed application and supporting plans and documents to the Westchester County Soil and Water Conservation District on all applications meeting the criteria set forth in § 165-6D. All applications not handled by the Building Inspector or Town Engineer administratively shall be referred to the Conservation Board. The Westchester County Soil and Water Conservation District or the Conservation Board, as applicable, shall be required to review the application within 30 days of receipt thereof and shall file a written report with the permitting authority with its recommendations concerning the application, including, but not limited to an evaluation of the completeness of the application. Such report shall evaluate the proposed operation or project in terms of the environmental management objectives of this chapter and shall include the effect of such operation or project on the project area. The permitting authority may also refer any application, where applicable, to any other local governmental or public agency within whose jurisdiction the site is located, for review and comment. Failure on the part of the Conservation Board, the Westchester County Soil and Water Conservation District or other interested agency to report its recommendation within 30 days after receipt of such referral shall be deemed to constitute no objection to the application. Within 30 days of receipt of comments from interested agencies or 60 days after declaring an application complete, whichever is later, the permitting authority shall thereafter, in writing:

- (1) Approve the permit application if it is found to be in conformance with the provisions of this chapter and issue the permit;

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- (2) Approve the permit application subject to such reasonable conditions as may be necessary to secure substantially all the objectives of this chapter and issue the permit subject to these conditions; or
- (3) Disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission.

B. No erosion and sediment control permit shall be issued for an intended development site unless:

- (1) The development has been approved by the town where applicable;
- (2) Such permit is accompanied by or combined with a valid building permit issued by the town; or
- (3) The proposed earthmoving is coordinated with any overall development program previously approved by the town for the area in which the site is situated.

C. Pending preparation and approval of a revised plan, development activities shall be allowed by the permitting authority.

**§ 165-13. Appeals.**

The applicant, or any person or agency which received notice of the filing of the application, may appeal the decision of the permitting authority, as provided in § 165-12 of this chapter, to the Town Board. Upon receipt of an appeal, the Town Board shall schedule and hold a public hearing, after giving 15 days' notice thereof. The Town Board shall render a decision within 30 days after the hearing. Factors to be considered in review shall include, but are not limited to, the effects of the proposed development activities on the surface water flow to tributaries and downstream lands; any comprehensive watershed management plans, or the use of any retention facilities; possible saturation of fill and unsupported cuts by water, both natural and domestic runoff surface waters that produce erosion and silting of drainageways; nature and type of soil or rock which, when disturbed by the proposed development activities, may create earth movement and produce slopes that cannot be landscaped; and excessive and unnecessary scarring of the natural landscape through grading or removal of vegetation.

**ARTICLE III, Operation Standards and Requirements**

**§ 165-14. Applicability.**

All grading, stripping, excavating and filling which is subject to the permit requirements of this chapter and any grading, stripping, excavating and filling which is exempted from the permit requirements by § 165-7, shall be subject to the applicable standard and requirements set forth in this article.

**§ 165-15. Responsibility.**

The permittee shall not be relieved of responsibility for damage to persons or property otherwise imposed by law, and the town or its officers will not be made liable for such damage, by:

A. The issuance of a permit under this chapter;

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- B. Compliance with the provisions of that permit or with conditions attached thereto;
- C. Failure of municipal officials to observe or recognize hazardous or unsightly conditions;
- D. Failure of municipal officials to recommend denial of, or to deny a permit; or
- E. Exemptions from the permit requirement of this chapter.

**§ 165-16. Manual adopted by reference; conflicts.**

The standards and specifications contained in the document, cited in § 165-9, are hereby incorporated in this article and made a part hereof by reference for the purpose of delineating procedures and methods of operation under site development and erosion and sedimentation control plan approved under Article II. In the event of conflict between provisions of said documents and of this chapter, this chapter shall govern.

**§ 165-17. Inspection.**

A. The Town Engineer, Building Inspector, Environmental Code Inspector or their designated agent shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the site development or erosion and sediment control plan, as approved. Plans for grading, stripping, excavating and filling work bearing a stamp affixed by the Town Engineer indicating work has been performed in general accordance with the plans shall be maintained at the site during the progress of the work. In order to obtain inspections, the permittee shall notify the Town Engineer and the Environmental Code Inspector, or a designated agent, at least three working days before the completion of stripping and clearing, rough grading, final grading and final landscaping. If stripping, clearing, grading and/or landscaping are to be done in phases or areas, the permittee shall give notice and request inspection at the completion of each of the above work stages in each phase or area. If an inspection is not made and notification of the results given within five working days after notice is received by the town from the permittee may continue work at his own risk, without presuming acceptance by the municipality. Notification of the results of the inspection shall be given, in writing, at the site.

B. The permittee or his agent shall make regular inspections of all control measures in accordance with the inspection schedule outlined in the approved erosion and sediment control plan(s). The purpose of such inspections will be to determine the condition and need for replacement or repair of in-place control measures, the overall effectiveness of the control plan and the need for additional control measures. All inspections shall be documented in written form and submitted to the Town Engineer at the time interval specified in the approved permit.

**§ 165-18. Special precautions.**

A. If at any stage of the grading at any development site the Town Engineer, Building Inspector, Environmental Code Inspector or a designated agent determines, by inspection, that the nature of the site is such that further work authorized by an existing permit is likely to imperil any property, public way, watercourse or drainage structure, the Town Engineer, Building Inspector or Environmental Code Inspector may require as a condition of allowing the work to be done that such reasonable special precautions be taken as are considered advisable to avoid the likelihood of such peril. Special precautions may include, but are not limited to, a reduced grade of exposed slope, construction of additional drainage facilities, berms, terracing, compaction or cribbing, installation of plan materials for erosion control and recommendations of a registered engineer and/or geologist, which may be made requirements for further work.

B. Where it appears that storm damage may result from incomplete grading on any development site, work may be stopped and the permittee required to install temporary structures or take such other measures as may be necessary to protect adjoining property or the public safety. On large developments or where unusual site conditions prevail, the Town Engineer or Environmental Code Inspector may specify the time of start of grading and time of completion or may require that the operations be conducted in specific stages to ensure completion of protective measures or devices prior to the advent of seasonal rains.

**§ 165-19. Amendment of plans.**

Major amendments of the site development of erosion and sediment control plans shall be submitted to the permitting authority and shall be processed and approved or disapproved in the same manner as the original plans. Field modifications of a minor nature may be authorized by the permitting authority by written authorization to the permittee. There shall be no oral authorization amending an erosion and sediment control plan.

**§ 165-20. Expiration of permit.**

PART II GENERAL LEGISLATION

Chapter 165, EROSION AND SEDIMENT CONTROL

ARTICLE III, Operation Standards and Requirements

§ 165-20. Expiration of permit.

All erosion and sediment control permits shall expire if the work authorized by such permit is not substantially started within one year or is not completed by a date which shall be specified in the permit. The permitting authority may, upon written presentation of sufficient justification for delay made prior to the expiration of the permit, grant a reasonable extension of time to begin the work prescribed under the permit. Unless otherwise indicated, all permits shall be valid for a period of three years from the date of issue. No permit shall be valid for greater than a three-year period. An extension of an original permit may be granted upon written request to the permitting authority at least 90 days prior to the expiration date of the original permit. The request for renewal of a permit shall follow the same form and procedure as the original application.

## ARTICLE IV, Enforcement

### § 165-21. Authorization of exceptions.

The Town Board may, in accordance with the following procedures, authorize exceptions to any of the requirements and regulations set forth in this chapter:

A. Petition.

- (1) Application for any exception shall be made by a verified petition of the application for an erosion and sediment control permit, stating fully the grounds of the petition and the facts relied upon by the applicant.
- (2) Such petition shall be filed with the erosion and sediment control permit application. In order for the petition to be granted, it shall be necessary that the Town Board find all of the following facts with respect to the land referred to in the petition.
  - (a) That the land is of such shape or size or is affected by such physical conditions or is subject to such title limitations of record that it is impossible and/or impractical for the applicant to comply with all of the requirements of this chapter.
  - (b) The exception is necessary to prevent unreasonable and unnecessary hardship; and
  - (c) That the granting of the exception will not be detrimental to the public welfare or injurious to the other property in the vicinity of the subject property.

B. Each application for an exception shall be referred to the Town Engineer and Conservation Board for review. The Town Engineer and Conservation Board shall transmit its recommendations to the Town Board which shall review such recommendations prior to granting or denying the exception.

C. The Town Board shall hold a public hearing on each application for exception, within 45 days after receiving application in the manner provided with respect to appeals. After public hearing, the Town Board may approve the erosion and sediment control permit application with the exceptions and conditions it deems necessary, or it may disapprove such erosion and sediment control permit application and exception application or it may take such other action as appropriate.

### § 165-22. Stop-work order. [Amended 4-2-2002 by L.L. No. 1-2002]

A. The Town Engineer, Building Inspector or Environmental Code Inspector may post a stop-work order for the entire project or any specified part thereof if any of the following conditions exist:

- (1) Any land disturbance activity regulated under Chapters 165 is being undertaken without a permit.

PART II GENERAL LEGISLATION

Chapter 165, EROSION AND SEDIMENT CONTROL

ARTICLE IV, Enforcement

§ 165-22. Stop-work order. [Amended 4-2-2002 by L.L. No. 1-2002]

(2) The erosion and sediment control permit is not being fully implemented.

(3) Any of the conditions of the permit are not being met.

B. The stop-work order shall be effective immediately, shall state the specific violations cited and shall state the conditions under which work may be resumed.

C. For purposes of this section, a stop-work order is validly posted by posting a copy of the stop-work order on the site of the land-disturbing activity in reasonable proximity to a location where the land-disturbing activity is taking place. Additionally, a copy of the order, in the case of work for which there is a permit, shall be mailed by first class mail, postage prepaid, to the address listed by the permittee on the permit. In the case of work for which there is no permit, a copy of the order shall be mailed to the person listed as owner of the property by the Town Assessor on the tax roll or, if none, to the taxpayer shown by the records of the Town Assessor.

D. If the permittee does not cease the activity or comply with the erosion and sediment control permit or permit conditions within one day, the issuing authority may revoke the permit. No erosion and sediment control permit shall be permanently suspended or revoked until a public hearing is held by the Town Board.

(1) Written notice of such hearing shall be served on the permittee, either personally or by registered mail, and shall state:

(a) Grounds for complaint or reasons for suspension or revocation, in clear and concise language; and

(b) The time and place of the hearing to be held.

(2) Such notice shall be served on the permittee at least one week prior to the date set for the public hearing, unless the stop-work order is issued for a violation occurring less than one week before the next regularly scheduled public meeting of the Town Board. At such hearing, the permittee shall be given an opportunity to be heard and may call witnesses and present evidence on his behalf. At the conclusion of the hearing, the Town Board shall determine whether the permit shall be reinstated, suspended or revoked.

E. If the owner or land user, where no permit has been issued, does not cease the land-disturbance activity, the issuing authority may request the Town Attorney to obtain injunctive relief.

F. The issuing authority may retract the revocation.

G. Ten days after posting a stop-work order, the issuing authority may issue a notice of intent to the permittee, owner, or land user of the issuing authority's intent to perform work necessary to comply with Chapter 165. The issuing authority may go on the land and commence work after 14 days from issuing the notice of intent. The costs incurred by the issuing authority to perform this work shall be paid by the owner or permittee out of the posted erosion bond, to the extent that the amount is covered thereby, with the remainder being directly due and owing by the owner or permittee. In the event no permit was issued or no bond was posted, the cost, plus interest, at the rate authorized by the issuing authority, plus a reasonable administrative fee, shall be billed to the owner. If, in any event, the amount due is not paid, the Receiver of Taxes shall enter the amount due on the tax roll and collect as a special assessment against the property using the procedures for collecting the assessment, providing for the notice of assessment, hearing thereon, and appeal as provided.

H. Compliance with the provisions of Chapter 165 may also be enforced by injunction.

**§ 165-23. Penalties for offenses.**

A. No person shall construct, enlarge, alter, repair or maintain any grading, excavation or fill, or cause the same to be done, in contravention or violation of any terms of this chapter.

B. Any person convicted of having violated or disobeyed any provision of this chapter, any order of the approval authority or any condition duly imposed by the approval authority in a permit granted pursuant to this chapter shall, for the first offense, be punishable by a fine of not less than \$1,000. For each subsequent offense, such person shall be punishable by a fine of not less than \$2,000 nor more than \$15,000 and/or a term of imprisonment of not more than 15 days. Each consecutive day of the violation may be considered a separate offense. In addition to any other penalty authorized by this section, any person convicted of violating or disobeying any provisions of this chapter shall be required to restore the site to the condition existing prior to commission of the violation, or the Town Board may cause the violation to be corrected if the permittee fails to act and the cost thereof shall be assessed against the land or property in such manner as Town taxes are levied, and it shall constitute a lien upon the land or property affected. The term "person" as used herein shall mean a natural person or a corporate person.

**§ 165-24. Additional remedies.**

The Town of Yorktown may maintain an action or proceeding in a court of competent jurisdiction to compel compliance with or to restrain by injunction the violation of any provision of this chapter or the terms and conditions of any permit granted hereunder.

**§ 165-25. Issuance of appearance tickets. [Added 4-2-2002 by L.L. No. 1-2002]**

The purpose of this section is to authorize the Environmental Inspector of the Town of Yorktown to issue and serve appearance tickets in connection with the violation of local laws, ordinances or rules and regulations of the Town of Yorktown which he is authorized or required to enforce.





# Local Law Filing

NEW YORK STATE DEPARTMENT OF STATE  
41 State Street, ALBANY, NY 12231

(Use this form to file a local law with the Secretary of State.)

Text of law should be given as amended. Do not include matter being eliminated and use italics or underlining to indicate new matter.

32 pages  
STATE OF NEW YORK  
DEPARTMENT OF STATE  
**FILED**  
OCT 07 2002

~~CITY~~

~~CITY~~

Town

of North Elba

~~VILLAGE~~

Local Law No. 3

of the year 2002

MISCELLANEOUS  
& STATE RECORDS

A local law to enact a Stormwater Management Ordinance for the Village of Lake Placid  
(Insert Title) and the Town of North Elba

Be it enacted by the Town Board  
(Name of Legislative Body) of the

~~COUNTY~~

~~COUNTY~~

Town

of North Elba

~~VILLAGE~~

as follows:

Section 1. The annexed "Stormwater Management Ordinance", consisting of Sections 1 through 17 and Schedules A through E and set forth on Pages 2 through 30 hereof, is hereby enacted as Appendix G of the Joint Village of Lake Placid/Town of North Elba Land Use Code.

Section 2. This local law shall take effect on the later of the two dates on which the Village of Lake Placid Board of Trustees and the Town of North Elba Town Board enacts this local law and files it in the Secretary of State's Office.

**SECTION 1 – SHORT TITLE.** This shall be known as the "Stormwater Management Ordinance of the Village of Lake Placid and Town of North Elba." For the purpose of simplicity, the two foregoing entities may be hereinafter referred to as the "Municipality."

**SECTION 2 – FINDINGS OF FACT.** The foregoing Village and Town find that uncontrolled drainage and runoff associated with land development and subdivisions has a significant impact on the health, safety, and welfare of the community for the following reasons:

- A. Stormwater can carry pollutants into receiving water bodies and degrade water quality.
- B. The increase in nutrients in stormwater runoff accelerates eutrophication of receiving waters.
- C. Improper design and construction of drainage facilities can increase the velocity of runoff, thereby increasing stream bank erosion and sedimentation.
- D. Construction requiring land clearing and alteration of natural topography tends to increase erosion.
- E. Siltation of water bodies resulting from increased erosion decreases the capacity of the water bodies to hold and transport water, interferes with navigation, and harms flora and fauna.
- F. Impervious surfaces increase the volume and rate of stormwater runoff and allow less water to percolate into the soil, thereby decreasing groundwater recharge and stream baseflow.
- G. Improperly managed stormwater runoff can increase the incidence of flooding and the level of floods which occur, endangering property and human life.
- H. Substantial economic losses and costs can result from these adverse impacts on the waters of the Village and Town.
- I. Many problems can be avoided if sound stormwater runoff management practices are in effect.

**SECTION THREE – EFFECTIVE DATE.** The effective date of this Ordinance shall be the last day in 2002 upon which both the Village and Town Boards formally adopt said Ordinance.

**SECTION 4 – STATUTORY AUTHORITY.** Article 9 of the Town Law or Article 7 of the Village Law and Environmental Conservation Law Section 43-0112.

**SECTION 5 – PURPOSE AND OBJECTIVES:** The purpose of this Ordinance is to protect and safeguard the general health, safety, and welfare of the public residing in or visiting the Municipality by preserving and protecting the quality of the ground and surface waters. This Ordinance has the following specific objectives:

- prevent any increase in stormwater runoff from any development in order to reduce flooding, siltation, and streambank erosion,
- prevent any increase in pollution caused by stormwater runoff from development which would otherwise degrade the quality of the waters within the Village of Lake Placid and Town of North Elba and render them unfit for human consumption, interfere with water-based recreation, or adversely affect aquatic life, and
- prevent any increase in the total annual volume of surface water runoff which flows from any specific site during and following development over that which prevailed prior to development.

**SECTION 6 – DEFINITIONS.** The terms used in this Ordinance, or in documents prepared or reviewed under this Ordinance, shall have the meanings set forth in Schedule A of this Ordinance.

**SECTION 7 – JURISDICTION.** General Applicability: This Ordinance shall apply to all construction and alteration of buildings, land clearing, and subdivision of land within the municipalities, both public and private, except development which is expressly exempt pursuant to Section 8 H. of this Ordinance. Permits and approvals required by this Ordinance may be incorporated into the site plan, land use, or zoning approvals issued under separate provisions of the municipalities' land use program.

#### **SECTION 8 - PROHIBITIONS**

**A.** Except for the activities exempted in paragraph H. of this section, no person shall build, construct, erect, expand, or enlarge any building or structure or place or construct any impervious surface such as pavement, blacktop, macadam, without first receiving a stormwater management permit from the Municipality, unless otherwise exempted herein.

B. No person shall create a subdivision of land subject to approval by the Municipality until first receiving a stormwater management permit from the Municipality for all buildings, structures, and impervious surfaces proposed to be created except that the terms of this Ordinance shall not apply to persons engaged in activities for which required municipal permits and approvals were issued prior to the effective date of this Ordinance.

C. No owner of real property shall maintain a condition which, due to human disturbance of land, vegetative cover or soil, results in the erosion of soil into any water body. The municipality shall notify a property owner of such condition on his property and shall afford a reasonable time period to correct any such condition before a violation shall be deemed to exist. A reasonable time period is seven days, but may be longer or shorter, at the discretion of the CEO.

D. Except for the activities exempted in paragraph H. of this section herein, no person shall operate a land clearing machine such as a backhoe, grader, or plow or similar device so as to clear or grade land or otherwise remove vegetative cover or soil or to overlay natural vegetative cover with soil or other materials when such activities involve an area of land greater than 5000 square feet without first having received a permit under this Ordinance.

E. No person shall fail to comply with any provision or requirement of any permit issued pursuant to this Ordinance.

F. No person shall create a condition of flooding, erosion, siltation or ponding resulting from failure to maintain previously approved stormwater control measures where such condition is injurious to the health, welfare, or safety of individuals residing in the Municipality, or injurious to any land within the Municipality. The Municipality shall notify a property owner of such condition on his property and prescribe measures necessary to re-establish effective performance of the approved stormwater control measures. The Municipality shall afford such property owner a reasonable time period in which to correct any such condition, before a violation is deemed to exist.

G. No person shall build, alter, or modify a stormwater control measure without first receiving a permit from the Municipality. Such building, alteration, and/or modification does not include the ordinary maintenance, cleaning, and/or repair of stormwater control measures, e.g., infiltration devices, retention basins, etc.

H. The following activities are exempt from the requirements of this Ordinance:

(1) Emergency repairs to any stormwater control measure.

(2) Development involving land disturbance and land clearing of less than 5000 square feet which does not result in the creation of new impervious surfaces of more than 1000 square feet. These are cumulative for the life of the property or site.

(3) Any logging and agricultural activity which is consistent with a soil conservation plan consistent with "NY State Forestry Best Management Practices Field Guide" of January 2000, or replacement thereof as applicable.

(4) Any building, construction, or land clearing occurring outside the drainage basins of North Elba from which all stormwater discharged from the development site is discharged outside of the basins.

(5) Activities of an individual engaging in home gardening by growing flowers, vegetables and other plants primarily for use by that person and his or her family.

## **SECTION 9 – PROJECT CLASSIFICATION FOR STORMWATER MANAGEMENT**

**A. Minor Projects.** Depending upon site-specific conditions, the following development activities shall be considered to be minor projects.

(1) Any building, land clearing, or development activity affecting less than 15,000 square feet.

(2) Creation of a two-lot, three-lot, or four-lot subdivision which may result in the construction of no more than one single-family residential structure and related accessory structures per lot, and will require land clearing or alteration activities of less than 15,000 square feet per lot and less than 15,000 square feet total for any subdivision road.

(3) Any building, alteration, or modification of a stormwater control measure, excluding maintenance, cleaning, or repair of such stormwater control measure.

**B. Major Projects.** Any project not expressly exempted from regulation or defined as a minor project shall be a major project.

(1) The following may be considered to be major projects:

(a) Any part of the activity listed in Section 9.A. (1), (2), or (3) which occurs on (i) soils of high potential for overland or through-soil pollutant transport; (ii) an area with a slope of fifteen percent (15%) or greater when measured in any direction

over a distance of one hundred (100) feet from the center of the proposed building site; (iii) or an area with a soil percolation rate slower than sixty (60) minutes per inch.

(b) Any minor project may be treated as a major project if such treatment is desirable due to specific site limitations or constraints, anticipated environmental impacts, or the need or advisability of additional public notice and comment. When determining whether to treat a minor project as a major project, the criteria to be considered shall include, but shall not be limited to, whether the site lies within or substantially contiguous to any of the following: (i) a Critical Environmental Area established pursuant to SEQR; (ii) a wetland; (iii) a stream corridor; (iv) an area of significant habitat for any wildlife or plant species; (v) or an area of particular scenic, historic, or natural significance.

The project sponsor of a minor project that will be treated as a major project shall be given a written statement of the reasons for such a determination.

## **SECTION 10 – DESIGN REQUIREMENTS AND PERFORMANCE STANDARDS**

A. Minor Projects. The following requirements shall apply to minor projects:

(1) Stormwater shall be managed on-site using stormwater control measures designed to afford optimum protection of ground and surface waters. Stormwater control measures shall be selected by giving preference to the best management practices for pollutant removal and flow attenuation as specified in Schedule C. Stormwater may be calculated in accordance with the methodology for determining stormwater volume and flow rates for major projects found in Schedule B, Part III or, in the alternative, at a flat rate of 1.5 gallons of stormwater for every square foot net increase in impervious area. Net increase is the difference between predevelopment and post-development conditions. All water from newly created impervious areas which would otherwise run off the parcel shall be directed to an infiltration device. Location of the infiltration devices shall be determined based upon soil test results.

(2) Stormwater control measures may include, but shall not be limited to, drywells of precast concrete, pits of crushed rock lined with geotextile fabric, and infiltration trenches. Such measures may also include natural and human-made landscape features such as depressions, blind ditches, retention ponds, swales, and others. Inlets to infiltration devices shall be protected from sediment at all times in order to maintain their capacity.

(3) Infiltration devices shall not be installed up-gradient within twenty (20) feet of the subsurface treatment system of a wastewater treatment system. Infiltration

devices for roadways, parking lots, and other areas subject to vehicle traffic shall not be installed within 100 feet of any water well, wetland, or water body.

(4) Infiltration devices and buildings shall be designed to maintain maximum attainable horizontal distance separation from wells, water bodies, and wetlands. Pumping stormwater shall not be permitted.

(5) The bottom of any infiltration device shall be a minimum of two feet above seasonal high ground water mark and two feet above bedrock.

(6) Temporary erosion controls shall be required to prevent siltation of water bodies during construction.

(7) Stormwater control measures proposed to be installed at locations with slope > 15% before grading, soil percolation rate slower than 60 minutes per inch, or which require placement of fill to meet horizontal distance separations specified in this Subpart shall be designed by a licensed professional engineer, architect, or exempt land surveyor.

**B. Major Projects.**

(1) Stormwater volumes and rates of flow shall be calculated using the methods specified in Schedule B Part III.

**(2) Design Requirements for Stormwater Control Measures.**

(a) Stormwater control measures shall be designed so that there will be no increase in runoff volume from a ten-year frequency/twenty-four hour duration storm event following development over the predevelopment volume.

(b) For storm events exceeding the 10-year design storm, the stormwater control measures shall function to attenuate peak runoff flow rates for a 25-year frequency storm to be equal to or less than predevelopment flow rates. For development greater than five (5) acres, consistent with New York State Guidelines, stormwater control measures shall function to attenuate peak runoff flow rates for a 100-year storm to be equal to or less than predevelopment flow rates. Attenuation of the 100-year storm is intended to reduce the rate of runoff from development to prevent expansion of the 100-year flood plan so as to alleviate flooding of improved properties and roadways. The minimum requirement for peak flow attenuation can be waived for the 100-year storm event where it can be proven that downstream flooding is not a concern, such as where excess stormwater runoff is discharged to water bodies of the Municipality or to a regional stormwater facility designed to handle additional volume and peak discharge. The cumulative effect of all proposed development projects within the watershed should be considered in making this determination. Storm intensity bar

graphs for the Town of North Elba, New York shall be used in the design of the stormwater control measures. These graphs are annexed to this Ordinance as Schedule D entitled "Storm Intensity Graphs." Additionally, for development greater than five (5) acres, coverage is required under a State Pollutant Discharge Elimination System (SPDES) General Stormwater Permit administered by the Department of Environmental Conservation.

(c) Infiltration devices shall be designed such that the bottom of the system will be a minimum of two feet above the seasonal high groundwater level to be realized following development. Where compliance with this requirement would prevent compliance with sub-paragraph (e) of this Section, compliance with this requirement may be waived. This provision shall not apply to wet ponds and similar stormwater control measures which are designed to be built in the saturated soil zone.

(d) Infiltration devices for major projects shall be located a minimum of one hundred (100) feet from the waters of the Town of North Elba and Village of Lake Placid and any down-gradient drinking water supply, lake, river, protected stream, water well, pond, wetland; a separation of more than one hundred (100) feet may be required in cases where contamination of the water supply is possible due to highly permeable soils, shallow groundwater, and similar situations. The separation distance shall be a minimum of fifty (50) feet from up-gradient water supplies. Designs shall mitigate adverse effects that groundwater recharge will have on adjacent wells, water supplies, wastewater treatment systems, buildings, roadways, properties, and stormwater control measures. Stormwater recharge areas shall be located a minimum of one hundred (100) feet from the subsurface treatment system of a wastewater treatment system unless it is demonstrated that a lesser separation will not adversely affect the functioning of such leach fields.

(e) Infiltration devices shall be designed to extend a minimum of ten percent of the infiltration surface area below the prevailing frost depth or four feet (whichever is greater) in order to provide infiltration during winter months.

(f) Infiltration devices shall be designed based on the infiltration capacity of the soils present at the project site. Soil evaluation methods shall be in accordance with Schedule B, Part IV, Soil Evaluation Methods.

(3) Additional Requirements for Major Projects.

(a) Stormwater control measures shall be used in the following order of preference: (i) infiltration devices; (ii) artificial wetlands and acceptable natural treatment systems; (iii) flow attenuation by use of open vegetated swales and depressions; (iv) stormwater detention. Stormwater control measures shall be selected by giving preference to the best management practice for pollutant removal and flow attenuations as indicated in Schedule C.



(b) All stormwater control measures shall be designed to completely drain to return to design levels in accordance with the following: infiltration basin 5 days; infiltration trench 15 days; dry well 15 days; porous pavement 2 days; vegetation depression 1 day.

(c) Pretreatment devices such as sediment traps, detention/stilling basins, filter strips, grassy swales, or oil/water separators shall be provided for runoff from paved areas or other areas subject to human-induced pollution including grease and oils, fertilizers, chemicals, road salt, sediments, organic materials, and settleable solids, which shall be sufficient to remove pollutants from the runoff.

(d) Stormwater control measures shall, at a minimum, incorporate the best available pollutant removal technology, which shall mean that which constitutes appropriate and cost effective means for removing pollutants from runoff so that the resulting treated stormwater will not degrade the water quality of any water body.

(e) Stormwater control measures shall be designed to preserve and maintain the base flow in all streams passing through, adjoining, or receiving runoff from the site.

(f) For development or redevelopment occurring on a site where development has previously occurred, the applicant shall be required to prepare concept plans and to develop construction estimates for stormwater control measures to control existing stormwater discharges from the site in accordance with the standards of this Ordinance to the maximum extent practicable. At a minimum the control measures shall include those reasonable and necessary to infiltrate the runoff from the first one-half inch of precipitation from any storm event for all areas within the site which have been previously developed. The phased implementation of such stormwater control measures for previously developed areas may be authorized.

C. General Requirements for Major and Minor Projects. The following requirements shall apply to major and minor projects:

(1) Stormwater control measures shall include such other measures as are deemed necessary to prevent any increase in pollution caused by stormwater runoff from development which would otherwise degrade the quality of the waters of Lake Placid Village and Town of North Elba, render them unfit for human consumption, interfere with water-based recreation, or adversely affect aquatic life.

(2) Emergency overflow provisions shall be made as necessary to prevent erosion, flooding, and damage to structures, roads and stormwater control measures.

(3) Stormwater control measures shall be designed to minimize adverse impacts to water bodies, minimize disturbance of water bodies, minimize land clearing,

minimize the creation of impervious surfaces, and to maximize preservation of natural vegetation and existing contours.

(4) Development which involves the creation of areas subject to intensive landscape maintenance such as golf courses, public parks, and botanical gardens shall require that a pest control and fertilizer management plan shall be prepared and included with the permit application.

## **SECTION 11 – EROSION CONTROL MEASURES**

A. Temporary erosion control shall be provided for all disturbed areas in accordance with the "New York Guidelines for Urban Erosion and Sediment Control." The temporary erosion control measures shall be maintained continuously until permanent control measures are in service. Infiltration devices shall be protected from siltation during the period of construction and until the site is successfully revegetated by use of silt screens, inlet protection devices, sediment detention ponds, or other suitable erosion control measures.

B. Staging of construction to facilitate erosion control shall be required. Only those areas where construction is actively occurring shall remain open and unvegetated. All areas that are not within an active construction area shall be mulched and stabilized or shall be mulched and revegetated. An active construction area is defined as one that has seen substantial construction with the past seven (7) calendar days. Mulching or revegetation for erosion control shall be completed within ten (10) days following the last substantial construction activity.

C. Compliance with the following restrictions shall be required.

(1) No vegetation shall be felled into any lake, pond, river, stream, or intermittent stream and if inadvertently felled into one of these water bodies, shall be removed immediately from the water body. The removal of dead, or dying, diseased trees or trees presenting a health or safety hazard shall not be exempt from this requirement.

(2) Within five hundred feet of the mean high water mark of any lake, pond, river, stream, or wetland, no land area, including areas stockpiled with earthen materials, which has been cleared may be made or left devoid of growing vegetation for more than twenty-four (24) hours without a protective covering securely placed over the entire area and/or erosion control measures properly installed to prevent sediments from entering the water body. Acceptable protective coverings include natural mulch of a depth of two inches, rock rip-rap, non-degradable materials such as plastic or canvas coverings, and impervious structures.

(3) Any area of land from which the natural vegetative cover has been either partially or wholly cleared or removed by development activities shall be revegetated within ten (10) days from the substantial completion of such clearing and construction. Acceptable revegetation shall consist of the following:

(a) Reseeding with an annual or perennial cover crop accompanied by placement of straw mulch or its equivalent of sufficient coverage, but not less than fifty percent (50%) of the total disturbed area, to control erosion until such time as the cover crop is established over ninety percent (90%) of the seeded area.

(b) Replanting with native woody and herbaceous vegetation accompanied by placement of straw mulch or its equivalent of sufficient coverage to control erosion until the plantings are established and are capable of controlling erosion.

(c) Any other recognized method which has been reviewed and approved by the Municipality as satisfying this requirement.

(4) Any area of revegetation must exhibit survival of a minimum of seventy-five percent (75%) of the cover crop throughout the year immediately following revegetation. Revegetation must be repeated in successive years until the minimum seventy-five percent (75%) survival for one (1) year is achieved.

(5) Ground clearing or grading activities which occur during the period October 15 to April 15, during which germination of vegetation typically will not take place, shall be required to incorporate extra measures during revegetation in order to reduce erosion and maintain water quality. These extra measures include, but are not limited to, the use of screen mesh, netting, extra mulch, and siltation fences.

## **SECTION 12 – MAINTENANCE OF STORMWATER CONTROL FACILITIES REQUIRED.**

A stormwater permit shall include, at a minimum, provisions for the future maintenance of the site, consistent with the following:

A. Applicability. Prior to issuance of a certificate of completion for any major project, or any minor project where it is deemed necessary, the project sponsor shall provide for arrangements for the future maintenance of stormwater control measures subject to the approval of the Municipality. This may include, but not be limited to, the following: approval of the by-laws and/or certificate of incorporation of a transportation corporation or Home Owners Association; posting of a performance bond; placing of funds on deposit; and a stormwater management maintenance agreement between the owner(s)

of the site and the Municipality consistent with the terms and conditions of Schedule E entitled Sample Stormwater Control Facility Maintenance Agreement.

**B. Purpose.** Stormwater management maintenance arrangements shall be those necessary to ensure that stormwater control measures are maintained in working condition throughout the life of the project.

**C. Notice.** The stormwater management maintenance agreement shall be recorded in the office of the County Clerk or its terms shall be incorporated into covenants appearing in the deed, declarations of covenants and restrictions or other such documents to ensure that record notice of its terms is provided to future owners of the site. It shall also be included in the offering plan, if any, for the project.

**D. Initial Maintenance Security.** The project owner(s) or sponsor shall establish a maintenance security in the form of a bond, letter of credit, escrow account, or other acceptable security, for the purpose of rebuilding, maintaining, or repairing the stormwater control facilities during the first two years following the approved completion of construction.

### **SECTION 13 – PERMIT APPLICATION REVIEW PROCEDURES**

**A. Plan Review.** It is the responsibility of the applicant to provide a detailed plot plan showing the location and dimensions of all existing and proposed structures and impervious surfaces, water courses, water bodies, wetlands, wells, septic systems, and stormwater control measures on the site. It should also provide a general description of potential run-off affecting the site from adjacent properties, and a location map of the site. Applications shall be submitted on forms prescribed by the Municipality and shall require an application fee, tax map number of affected parcels, a completed Part 1 Environmental Assessment Form, if required, and names and addresses of adjacent parcel owners as required.

**B. Minor Projects.** The zoning/land use office of the Municipality shall have primary responsibility for review, approval and issuance of stormwater management permits for residential minor projects. The Review Board of the Municipality shall have primary responsibility for the review, approval, and issuance of stormwater management permits for minor commercial projects. The zoning/land use office or Review Board may request technical assistance from the Essex County Planning Office or other appropriate agency.

(1) Prior to permit decisions a test pit may need to be witnessed.

(2) Prior to the issuance of a permit for any project, the zoning/land use officer, or Review Board, shall determine that the project as proposed is in accordance with the design standards of this Ordinance.

C. Major Projects. Major projects shall require site plan review in accordance with the combined Land Use Code of the Village of Lake Placid and Town of North Elba.

(1) Preparation of a Stormwater Control Report in accordance with Schedule B, Part II is required. Preparation of a Stormwater Concept Plan in accordance with Schedule B, Part I may be required if deemed necessary by the Municipality. The SCP and SCR shall be prepared by an engineer or architect or exempt land surveyor licensed to practice under the laws of the State of New York, who shall be employed by the applicant or developer to design and supervise the installation of all stormwater management facilities. Stormwater management shall be within the area of expertise of the particular individual or firm performing the design and construction supervision and, if requested, that individual or firm shall furnish a listing and description of all stormwater management projects designed or supervised by them within the past five (5) years.

(2) Approval of the Stormwater Concept Plan and stormwater control report may require a public hearing if the Municipal Zoning and Subdivision Ordinances require such a hearing.

(3) the Final Subdivision Plat shall contain stormwater control measures for all commonly owned roads, buildings, parking areas and impervious areas. Approved stormwater design plans shall be filed together with the Final Subdivision Plat with the County Clerk.

(4) Prior to the approval of the Final Subdivision Plat or commonly owned facilities, it shall be first determined that there is sufficient information to support a finding that the stormwater measures subject to future approval can be designed and constructed in accordance with this Ordinance.

(5) The site plan review shall require retention of an independent, professional consultant to review the proposed specifications, oversee construction, and give final approval upon completion of the project. The expenses of this review shall be borne by the applicant.

## **SECTION 14 – CRITERIA FOR ISSUANCE OF STORMWATER CONTROL PERMITS**

A. An application for a stormwater control permit may be approved, denied, or approved with modifications or conditions, including modifications to non-stormwater aspects of the development necessary to achieve the required level of stormwater management.

B. No stormwater management permit shall be issued unless the Municipality makes the following findings which shall be supported by substantial evidence. The facts supporting such findings shall be set forth in the decision document or permit. The issued permits shall set forth all required conditions and incorporate all necessary documents and maps. The findings are as follows:

(1) That the project meets the design requirements and performance standards set forth in this Ordinance.

(2) That the project will not have an undue adverse impact on the health, safety, and welfare of the public or on the resources of the Municipality and will not lead to a diminution of water quality, an increase in erosion, or an increase in stormwater runoff from the site either during or following construction.

(3) That the stormwater control measures proposed for the proposed project will function as designed and that such measures represent the best possible methods and procedures for controlling stormwater runoff that is feasible and practicable at the particular project site.

(4) That adequate and sufficient measures have been taken to ensure accountability and responsibility over the life of the project should the stormwater control measures not function as intended, fail, or suffer from inadequate maintenance to ensure its proper functioning. The Municipality may require formation of a homeowner's association registered pursuant to Section 352-E of the New York State General Business Law and execution of a maintenance agreement consistent with Schedule E.

(5) That the proposed project will not contribute to flooding, siltation, or streambank erosion and will not result in any increase, directly or indirectly, in pollution to the water bodies within the Municipality from stormwater runoff.

## **SECTION 15 – VARIANCES**

A. If during the review of an application it is determined that the application of any design or dimensional requirement contained in this Ordinance will result in the denial of

the project, the applicant shall be afforded an opportunity to modify the project plans or, in the alternative, to make application for a variance. Upon denial of any permit application for a project for failure to conform with specific provisions of this Ordinance, the applicant may make an application for a variance.

B. If the applicant determines that any aspect of the project cannot meet any design or dimensional requirement contained in this Ordinance, the applicant may make direct application for a variance to the Zoning Board of Appeals.

C. Variance applications shall be on such forms as may be prescribed and shall conform with and contain the permit application requirements set forth in this Ordinance.

D. The granting of any variance shall be done in accordance with Section 267-a and 267-b of the New York State Town Law or Section 7-712-a and 7-712-b of the New York State Village Law and any amendments thereto as appropriate, provided, however, that the grant of any variance to the shoreline or cutting restrictions of §806 of the Adirondack Park Agency Act (Executive Law, Article 27) must be in compliance with that Section and §807 of the Act, if applicable.

E. An on-site inspection by the ZBA (Zoning Board of Appeals) is required for all uses which are subject to ZBA's jurisdiction, with an express proviso that where weather, ice, or snow conditions prevent a practical means of access to the subject property or impede the Board's ability to accurately assess site conditions, the review periods will be suspended until such access is possible.

**SECTION 16 – ENFORCEMENT PENALTIES.** Violations. Any development activity that is commenced or is conducted contrary to this Ordinance may be restrained by a stop work order, injunction or otherwise abated in a manner provided by law.

A. Civil and Criminal Penalties. In addition to or as an alternative to any penalty provided herein or by law, any person who violates the provisions of this Ordinance shall be punished by a fine of not less than One Hundred Dollars (\$100) nor more than One Thousand Dollars (\$1,000) or by imprisonment for a period not to exceed sixty (60) days, or both such fine and imprisonment. Such person shall be guilty of a separate offense for each day during which the violation occurs or continues.

B. Any violator may be required to restore land to its undisturbed condition. In the event that restoration is not undertaken within a reasonable time after notice, the Municipality may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

C. Notice of Violation. When the Municipality determines that an activity is not being carried out in accordance with the requirements of this Ordinance, it shall issue a written notice of violation to the owner of the property. The notice of violation shall contain

- (1) the name and address of the owner or applicant,
- (2) the street address when available or a description of the building, structure, or land upon which the violation is occurring;
- (3) a statement specifying the nature of the violation;
- (4) a description of the remedial measures necessary to bring the development activity into compliance with this Ordinance and a time schedule for the completion of such remedial action;
- (5) a statement of the penalty or penalties that shall or may be assessed against the person to whom the notice of violation is directed;
- (6) a statement that the determination of violation may be appealed to the Municipality by filing a written notice appeal within fifteen (15) days of service of notice of violation.

The notice of violation shall be served upon the person(s) to whom it is directed either personally, in a manner provided for personal services of notices by the court of local jurisdiction, or by mailing a copy of the notice of violation by certified mail, postage prepaid, return receipt requested, to such person at his or her last-known address.

A notice of violation issued pursuant to this section constitutes a determination form which an administrative appeal may be taken to the Municipality.

**SECTION 17 – SEVERABILITY.** Each separate provision of this Ordinance is deemed independent of all other provisions herein so that if any provision or provisions of this Ordinance be declared invalid, all other provisions shall remain valid and enforceable.



## **SCHEDULE A**

### **DEFINITIONS**

The following terms shall have the stated meanings when used in this Ordinance or in documents prepared or reviewed under this Ordinance:

(1) **Agricultural activities** means the activities of an active farm including grazing and watering livestock, irrigating crops, harvesting crops, using land for growing agricultural products, and cutting timber for sale, but shall not include the operation of a dude ranch or similar operation, or the construction of new structures associated with agricultural activities.

(2) **Base flow** means the stream discharge from groundwater runoff.

(3) **Blind drain** means a drain consisting of an excavated trench refilled with previous materials, such as coarse sand gravel or crushed stone through which water percolates and flows toward an outlet, often referred to as a French drain.

(4) **Building footprint** means that two-dimensional plane area of a building or structure which results when the height dimension is removed and which shows an aerial view of said building or structure including garages, shed, porches, eaves, covered breezeways, entryways and other similar attached appurtenances.

(5) **Catch basin** means an inlet structure for the collection of stormwater from impervious surfaces designed with a sump to trap sediment.

(6) **Department** means the Department of Environmental Conservation of the State of New York.

(7) **Detention** means the practice and procedures associated with the delayed release of stormwater so as to reduce peak flow, maintain base flow, increase opportunity for recharge to groundwater, and reduce opportunity for surface runoff and soil erosion.

(8) **Detention structure** means a permanent structure for the temporary storage of runoff which is designed so as not to create a permanent pool of water.

(9) **Develop land** means to change the runoff characteristics of a parcel of land in conjunction with residential, commercial, industrial or institutional construction or alteration.

(10) **Development** means any building, construction, expansion, alteration, modification, demolition or other activity, including land clearing, land disturbance, grading, roadway construction or expansion, mining or mineral extraction which

materially changes the use of appearance of land or a structure, or the intensity of the use of land, or the creation of a subdivision which may result in such activity, but not including interior renovations to a structure, a change in use of a structure which results in no land disturbance, or the construction or modification of a dock, wharf, or mooring.

(11) Development area or site means any parcel of property or lot or combination of contiguous lots which (a) are in common ownership, or (b) are in diverse ownership where development is to occur in common. For the purposes of this Ordinance, contiguous lands shall include those separated by a public highway.

(12) Disturbed area means that part of a development site area where actual land disturbance, vegetation removal, or construction of buildings, structures, or utilities will occur or has occurred.

(13) Drainage area means all of the area of land contributing runoff flow to a single point.

(14) Erosion means the wearing away of the land surface by water, wind, or ice or the detachment and movement of soil or rock fragments by water, wind, ice or gravity.

(15) Filter strip means a strip of permanent vegetation above ponds, diversion terraces and other structures to retard flow of runoff, causing deposition of transported material, thereby reducing sediment flow.

(16) Flow attenuation means prolonging the flow time of runoff to reduce the peak discharge.

(17) Hydrograph means a graph showing variation in stage (depth) or discharge of a stream of water over a period of time.

(18) Impervious area means an area covered by pavement, rooftops, and/or other structures or materials, which is either impervious to water or which substantially prevents the infiltration of water into the soil at that location.

(19) Infiltration means the downward movement of water from the surface to the subsoil. Infiltration rate is typically expressed as inches per hour.

(20) Infiltration device means a stormwater recharge area, drywell, recharge basin, retention basin or any other engineered structure designed to infiltrate stormwater.

(21) Infiltration rate means a soil characteristic determining or describing the maximum rate at which water can enter the soil under specified conditions, including the presence of an excess of water.

(22) Land disturbance or land clearing means grading, digging, cutting, scraping, excavating, removing of soil, placement of fill, paving or otherwise covering construction, substantial removal of natural or human-made vegetation, replacement of natural vegetation with lawn or other human-made vegetation, demolition or other removal of human-made features, or any activity which bares soil or rock. For the purposes of calculating the square footage affected by any development in order to determine a project's classification, all affected areas of the development site shall be considered in aggregate whether or not the affected areas are contiguous.

(23) Mulch means a natural or artificial layer of plant residue or other materials, such as sand or paper, on the soil surface which reduces erosion, maintains soil moisture, and facilitates seed germination.

(24) Municipality means the Town of North Elba and/or Lake Placid Village.

(25) Nonpoint source means any source from which pollutants are, or may be, discharged which is not a point source.

(26) Offering plan means a prospectus as required by §352-e of the General Business Law.

(27) Peak flow means the maximum instantaneous flow of water from a given condition at a specific location.

(28) Person means any individual, firm, partnership, club, trust, company, association, cooperative, corporation (including a government corporation), municipality, the State or Federal government and any agency thereof.

(29) Pollution means the condition caused by the presence in the environment of substances of such character and in such quantities that the quality of the environment is impaired or rendered offensive to live.

(30) Pollution source controls means the structures and practices used in reducing contaminants from point and/or nonpoint sources.

(31) Porous pavement means an open graded paving material which allows water to pass through it.

(32) Predevelopment means those site conditions which legally existed prior to the commencement of any activity regulated by this Ordinance.

(33) Project means any land use or development activity proposed by an applicant which is subject to this Subpart.

(34) Project life means the anticipated or actual time a project will be used, utilized or remain in functional existence.

(35) Rainfall intensity means the rate at which rain is falling at any given instant, usually expressed in inches per hour.

(36) Rational method means a widely accepted method for calculating stormwater runoff, volume and rates of flow for stormwater shed areas up to twenty acres.

(37) Redevelopment means any activity which alters a previously developed site.

(38) Retention means any activity which alters a previously developed site.

(39) Retention pond means a recharge basin which is designed to infiltrate all of the stormwater it receives and which normally has no outflow.

(40) Revegetation means the natural or artificial replacement of vegetation on a project site to reduce erosion, decrease runoff, improve water quality and improve aesthetic qualities of exposed soils.

(41) Runoff controls means those structures and/or devices, including, but not limited to, dry wells, porous pavements, ditches, wetlands, holding ponds, recharge areas, and retention/detention basins which recharge groundwater and provide for peak flow attenuation.

(42) Significant habitat means that area or region important in fulfilling the daily or seasonal habitat requirements of any species of plant or animal designated as endangered, threatened, rare, or of special concern by the Department pursuant to ECL Sections 11-0535 and 9-1503 and the Department's regulations thereunder, or by any individual species or any group of natural community of nonlisted plants and animals of significant economic, recreational, aesthetic, ecological or scientific importance.

(43) Siltation trap means a structure designed to trap sand and silt-sized particulate matter from stormwater.

(44) Site - (see Development Area)

(45) Stormwater means water produced by precipitation including snow melt which does not evaporate and which flows over a natural or human-made surface or into a natural or human-made channel.

(46) Stormwater Concept Plan or SCP means a report prepared in accordance with Schedule B of this Ordinance or on behalf of a project sponsor which includes

analysis of a site's environmental characteristics, potential impacts of the development on water resources and the effectiveness and acceptability of the proposed stormwater management system in order to determine the types of stormwater measures necessary for the proposed development.

(47) Stormwater control measures means all those natural and man-made structures, infiltration devices, erosion controls, systems, facilities, agreements, institutional arrangements, and financial provisions to manage stormwater including, but not limited to, any of the following: dry wells, pits of crushed rock, infiltration trenches, retention ponds, detention ponds, blind ditches, swales, pipes, culverts, natural depressions, porous paving, recharge areas, and basins.

(48) Stormwater Control Report or SCR means a report prepared in accordance with Schedule B of this Ordinance or on behalf of a project sponsor which evaluates the quantity and quality of stormwater runoff resulting from the proposed project. The report shall include a set of drawings and other documents to provide all the necessary information and specifications pertaining to stormwater management and associated pollution control for a particular site. The SCR is intended to implement the SCP.

(49) Stormwater design plan means the written narrative, maps, and diagrams prepared for the purpose of runoff control on a specific development site, based upon survey and analysis of the site.

(50) Stormwater management means: (i) for quantitative control, a system of vegetative and structural measures that control the increased volume and rate of surface runoff caused by human-made changes to the land; and (ii) for qualitative control, a system of vegetative, structural and other measures that reduce or eliminate pollutants that might otherwise be carried by surface runoff.

(51) Stormwater Management Maintenance Agreement means an agreement between the project sponsor and some other entity to ensure adequate maintenance and repair of the stormwater management system over the life of the project.

(52) Stormwater Management Plan or Plan means a local stormwater management plan adopted by a municipality pursuant to this Subpart and ECL Section 43-0112.

(53) Stormwater recharge area means an area of land used for the purpose of infiltrating stormwater.

(54) Stormwater Regulatory Program or Program means a local stormwater regulatory control program adopted by a municipality pursuant to 6NYCRR 646-4 and ECL Section 43-0112.

(55) Stormwater runoff means any surface water runoff or runoff in channels which results directly either from a rainstorm or from the melting of snowpack.

(56) Stream shall include any permanent or intermittent water course.

(57) Stream corridor means that area within one hundred (100) feet of the high water mark of any stream or river protected and/or regulated by New York State Department of Environmental Conservation, or wetlands adjacent thereto.

(58) Subcatchment means an identifiable drainage area contained within a large watershed or drainage area.

(59) Subdivision means a division of any land into two or more lots, parcels, or sites, whether the new lots are adjoining or not, for the purpose of sale, lease, license, or any form of separate ownership or occupancy by an person, including the conveyance of lands in common ownership which are divided only by a road or utility right-of-way. Creation of a condominium or townhouse project shall be considered a subdivision. This definition shall not apply to conveyances of small parcels of land to correct a boundary of a lot, so long as such conveyance does not create additional lots.

(60) Surface water runoff means water which flows over the land and does not percolate into the soil, and which may run off as a sheet, rill, or stream flow.

(61) Time of concentration means the time required for water to flow from the most remote point of a watershed, in a hydraulic sense, to the outlet.

(62) Water body means any lake, pond, river, stream, intermittent stream, or wetland.

(63) Water table means the upper surface or top of the saturated portion of the soil or bedrock layer, indicating the upper extent of groundwater.

(64) Watershed means the total drainage area contributing runoff to a single point.

## **SCHEDULE B**

### **ENGINEERING SPECIFICATIONS FOR DESIGN PROFESSIONALS**

#### **PART I CONTENT OF STORMWATER CONCEPT PLAN**

(1) A Stormwater Concept Plan (SCP), if required, shall include sufficient information to evaluate the environmental characteristics of the project site, the potential impacts of the proposed development on water resources and the effectiveness and acceptability of measures proposed for managing stormwater runoff. Sufficient engineering analysis shall be performed and provided to show that the stormwater control measures in the Plan are viable and capable of managing runoff from the site in compliance with these regulations and the municipality's Stormwater Management Plan and Regulatory Program. All anticipated development of the site and phases of the project, both present and future, shall be addressed in the SCP. The intent of this conceptual planning process is to determine the type of stormwater measures necessary for the proposed project. The SCP shall include any modifications to the proposed project necessary to achieve the required level of stormwater management. In order to ensure adequate planning for management of runoff from future development, a municipality may also require any SCP to consider the maximum development potential of a site under existing zoning, regardless of whether the applicant presently intends to develop the site to its maximum potential.

(2) For development or redevelopment occurring on a site where development has previously occurred, an applicant shall be required to include within the stormwater concept plan measures for controlling existing stormwater runoff discharges from the site in accordance with the standards of this Ordinance to the maximum extent practicable. Such measures shall also include those measures reasonable and necessary to, at a minimum, infiltrate the runoff from the first one-half inch of precipitation from any storm event for all areas within the site which have previously been developed

## PART II CONTENT OF THE STORMWATER CONTROL REPORT

A Stormwater Control Report (SCR) shall be submitted which evaluates the quantity and quality of stormwater runoff resulting from the proposed project for all phases, both present and future, and if required, for the maximum potential runoff from the site if it were to be developed to its maximum potential under existing zoning. The Stormwater Control Report Shall be consistent with, and shall be reviewed on the basis of the approved SCP. Contents of Stormwater Control Report (SCR). A SCR shall contain, at the minimum, the following information:

- (1) A description of the project site and surrounding area within five hundred (500) feet as it exists prior to the commencement of the project; a location map, description of the watershed of the subcatchment and its relation to the project site; soil types and descriptions on the site and surrounding area; topography of the project site and surrounding area; surface characteristics including percent cover by asphalt, concrete, crushed stone, grasses, brush, and trees; current land use including all structures, and characteristics of the shoreline and its development, if applicable; drainage patterns including streams, ponds, culverts, ditches, and wetlands; and locations of utilities, roads, and easements.
- (2) A detailed description of the proposed project including surface characteristics; proposed land use with tabulation of the percentage of surface area to be adapted to various uses; drainage patterns; locations of utilities, roads and easements; the limits of clearing and grading; and construction cost estimates of stormwater management structures.
- (3) Hydrologic and hydraulic computations of stormwater volume and flow for existing and proposed conditions shall be performed. Such computations shall include (i) description of the design storm frequency, intensity and duration, (ii) time of concentration, (iii) soil curve numbers or runoff coefficients, (iv) peak runoff rates and total runoff volumes for each watershed area or subcatchment area, (v) infiltration rates, (vi) culvert capacities, (vi) flow velocities, (viii) data on the increase and volume of runoff for the 10-year storm and on the change in the rate of runoff from the 2, 10, 50, and 100 year storms, (ix) documentation of sources for all computation methods and field test results, and (x) sufficient information to demonstrate that the proposed development, with its necessary stormwater controls, has been designed to preserve and maintain the base flow in all streams passing through, adjoining or receiving runoff from the site.
- (4) A description of how the stormwater control measures for the project will provide the best available pollutant removal technology.



(3) A detailed description of, and plans of, stormwater and erosion control measures including (i) proposed containment facilities and structures, (ii) calculations of infiltration area required, (iii) calculation of retention and/or detention/retention storage requirements and storage volume provided, (iv) calculation or documentation of infiltration rate, (v) calculation for release rate controls (orifice or pipe size), (vi) description of pollution control measures such as filter strips, sand filters, infiltration, (vii) provision for emergency overflow, and (viii) measures taken to obviate or reduce the need for runoff control such as use of porous pavement or crushed stone, or the minimization of land clearing or paving.

(6) Drainage maps at a scale specified by the municipality showing existing and proposed conditions and contours, including the watershed area and subcatchment boundaries, acreage, inlet and outlet points of streams, culverts and drainage ditches, surface features, existing and proposed structures, buildings, pavement, flow directions, existing and proposed storm sewers, streams and other drainage channels, water quantity and quality control structure including retention basins and infiltration trenches, and a location map at a scale specified by the municipality showing the entire watershed area and indicating the project site.

(7) A certification that the stormwater control measures as designed and presented in the SCR will function adequately, will not adversely affect adjacent or downstream waters or properties, and has been designed in accordance with this Ordinance. The report and plans shall bear the stamp and signature of the licensed professional engineer or architect or exempt land surveyor executing the above certification.

(8) A project schedule which shall indicate the proposed starting and completion dates for all major work phases including but not limited to clearing and grading, road construction, utility placement, septic systems, stormwater control measures, wharf construction, pouring or laying of footings and foundations, building construction, and interim and permanent revegetation. Particular emphasis shall be placed on those elements of the schedule relating to stormwater runoff and erosion control. In general, the control facilities shall be installed first in the construction stages of a project to minimize the impacts associated with construction. Further, the project schedule shall take into account appropriate seasonal limitations for temperature and weather sensitive operations. Special measures or procedures may be required to undertake land disturbance activities occurring between October 15 and April 15.

(9) A maintenance schedule which includes (i) the construction costs related to stormwater control, (ii) the proposed stormwater control maintenance program and annual costs of implementing such, (iii) identification of the party or parties responsible for maintenance of the system over the life of the project, (iv) a copy of any maintenance agreement, (v) identification of the party or parties responsible for correcting failures or inadequate function of stormwater control measures and responsible for assuming control of the systems in the event of failure to properly maintain the system.

(10) Application Inspections. Each application shall contain the written consent of the landowner that the municipality may conduct site inspections, tests, and evaluations as are deemed necessary by it to verify site data contained in the application. Such data shall include, but are not limited to, soil type, topography, depth to seasonal high groundwater, depth to bedrock and distance to surface bodies of water. During the site inspection one or more deep test holes and percolation tests may be required by the municipality to be performed by the application.

### **PART III METHODOLOGIES FOR DETERMINING RUNOFF VOLUMES**

Methodologies for determining runoff volume. Stormwater volumes and rates of flow shall be calculated using the following methods: (i) for small watershed areas (up to 20 acres), the Rational Method may be used, and (ii) for larger watershed areas (up to 2,000 acres), and as the overall preferred method, the United States Department of Agriculture Method shall be used, (this method is described in "Urban Hydrology for Small Watersheds-Technical Release 55"), or (iii) any other equivalent and widely accepted method may be used.

### **PART IV SOIL EVALUATION METHODS**

The design infiltration rate shall be based on the results of hydrogeologic studies performed by the applicant during preparation of the Stormwater Control Report. The studies shall include test pits or borings located to present a clear picture of geologic and hydrologic conditions existing at the site and the areas, both on and off the site, affecting, or to be affected by, the development. A minimum of three subsurface excavations shall be conducted and the results shall be included in the SCR. Interpretive logs of all excavations shall be submitted with the report. Hydrogeologic interpretations and conclusions shall be developed by qualified persons only. Following design of infiltration devices, additional subsurface investigations to confirm soil and groundwater conditions will be required in the areas proposed for infiltration devices. The design of any project or development shall ensure that the ability to manage stormwater is not affected by the placement of structures on those soils or locations best suited for stormwater management purposes.

# SCHEDULE C COMPARATIVE POLLUTANT REMOVAL OF URBAN BMP DESIGNS

BMP/design	SUSPENDED SEDIMENT	TOTAL PHOSPHORUS	TOTAL NITROGEN	DISSOLVED DEMAND	TRACE METALS	BACTERIA	OVERALL REMOVAL CAPABILITY
<b>EXTENDED DETENTION POND</b>							
DESIGN 1	●	○	○	○	○	⊗	MODERATE
DESIGN 2	●	○	○	○	○	⊗	MODERATE
DESIGN 3	●	○	○	○	○	⊗	HIGH
<b>WET POND</b>							
DESIGN 4	●	○	○	○	○	⊗	MODERATE
DESIGN 5	●	○	○	○	○	⊗	MODERATE
DESIGN 6	●	○	○	○	○	⊗	HIGH
<b>INFILTRATION TRENCH</b>							
DESIGN 7	●	○	○	○	○	○	MODERATE
DESIGN 8	●	○	○	○	○	○	HIGH
DESIGN 9	●	○	○	○	○	○	HIGH
<b>INFILTRATION BASIN</b>							
DESIGN 7	●	○	○	○	○	○	MODERATE
DESIGN 8	●	○	○	○	○	○	HIGH
DESIGN 9	●	○	○	○	○	○	HIGH
<b>POROUS PAVEMENT</b>							
DESIGN 7	○	○	○	○	○	○	MODERATE
DESIGN 8	●	○	○	○	○	○	HIGH
DESIGN 9	●	○	○	○	○	○	HIGH
<b>WATER QUALITY INLET</b>							
DESIGN 10	○	⊗	⊗	⊗	⊗	⊗	LOW
<b>FILTER STRIP</b>							
DESIGN 11	○	○	○	○	○	⊗	LOW
DESIGN 12	●	○	○	○	○	⊗	MODERATE
<b>GRASSED SWALE</b>							
DESIGN 13	○	○	○	○	○	⊗	LOW
DESIGN 14	○	○	○	○	○	⊗	LOW

KEY:

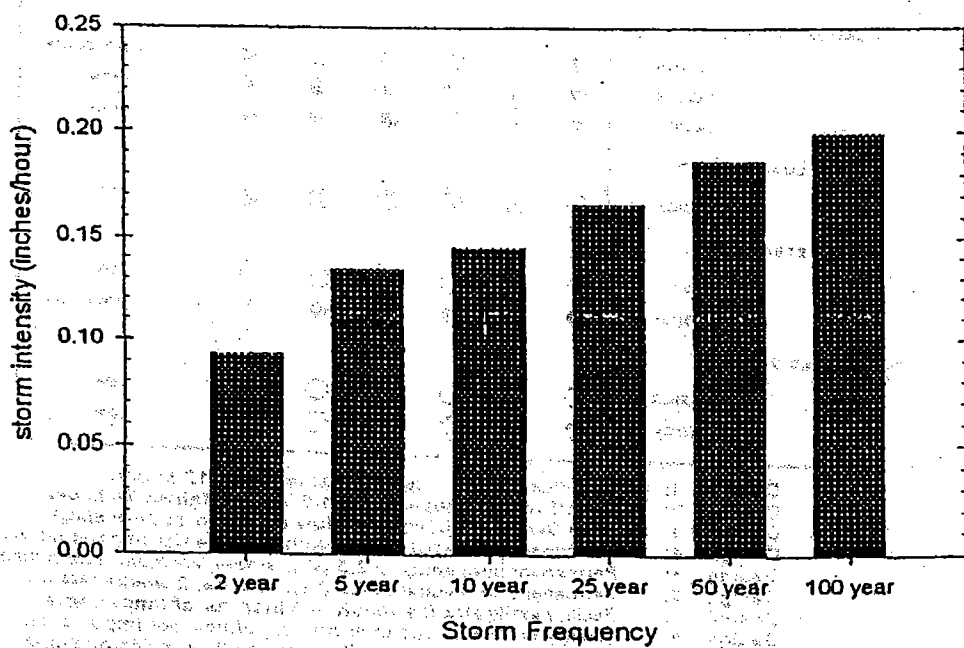
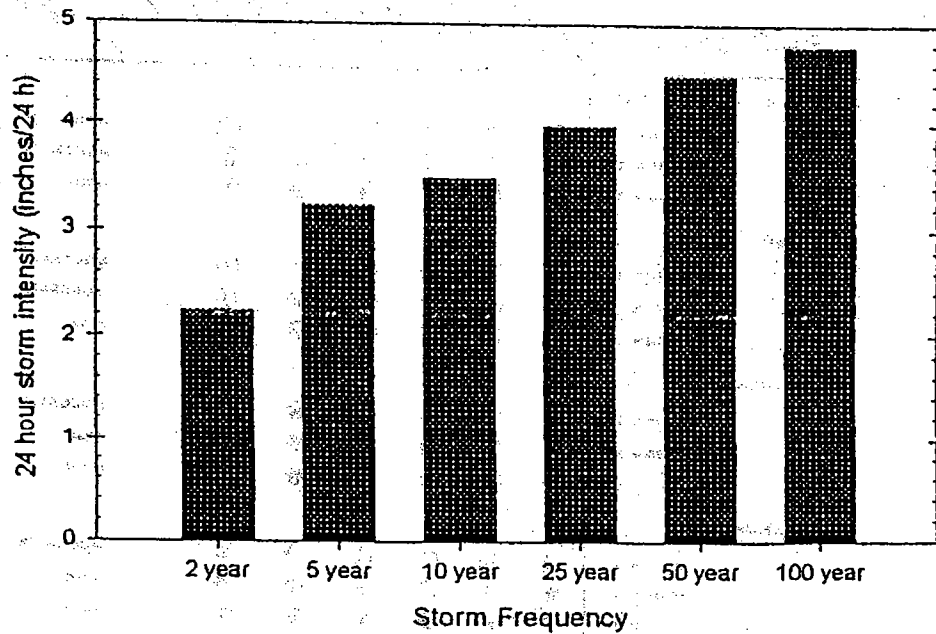
- 0 TO 20% REMOVAL
- 20 TO 40% REMOVAL
- 40 TO 60% REMOVAL
- 60 TO 80% REMOVAL
- 80 TO 100% REMOVAL
- ⊗ INSUFFICIENT KNOWLEDGE

- Design 1: First-flush runoff volume detained for 6-12 hours.
- Design 2: Runoff volume produced by 1.0 inch, detained 24 hours.
- Design 3: As in Design 2, but with shallow marsh in bottom stage.
- Design 4: Permanent pool equal to 0.5 inch storage per impervious acre.
- Design 5: Permanent pool equal to 2.5 (V<sub>r</sub>); where V<sub>r</sub>=mean storm runoff.
- Design 6: Permanent pool equal to 4.0 (V<sub>r</sub>); approx. 2 weeks retention.
- Design 7: Facility exfiltrates first-flush; 0.5 inch runoff/imper. acre.
- Design 8: Facility exfiltrates one inch runoff volume per imper. acre.
- Design 9: Facility exfiltrates all runoff, up to the 2 year design storm.
- Design 10: 400 cubic feet wet storage per impervious acre.
- Design 11: 20 foot wide turf strip.
- Design 12: 100 foot wide forested strip, with level spreader.
- Design 13: High-slope swales, with no check dams.
- Design 14: Low gradient swales with check dams.

(Source MWCG, 1987)

## SCHEDULE D

### STORM INTENSITY GRAPHS FOR NORTH ELBA, NEW YORK



Adirondack Aquatic Institute • P.O. Box 244, Paul Smiths, NY 12970 • (518) 327-6214  
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## SCHEDULE E

### SAMPLE STORMWATER CONTROL FACILITY MAINTENANCE AGREEMENT

Whereas, the Municipality of \_\_\_\_\_ ("Municipality") and the \_\_\_\_\_ ("facility owner") want to enter into an agreement to provide for the long term maintenance and continuation of stormwater control measures approved by the Municipality for the below named project, and

Whereas, the Municipality and the facility owner desire that the stormwater control measures be built in accordance with the approved project plans and thereafter be maintained, cleaned, repaired, replaced and continued in perpetuity in order to ensure optimum performance of the components. Therefore, the Municipality and the facility owner agree as follows:

1. This agreement binds the Municipality and the facility owner, its successors and assigns, to the maintenance provisions depicted in the approved project plans which are attached as Schedule A of this agreement.
2. The facility owner shall maintain, clean, repair, replace and continue the stormwater control measures depicted in Schedule A as necessary to ensure optimum performance of the measures to design specifications. The stormwater control measures shall include, but shall not be limited to, the following: drainage ditches, swales, dry wells, infiltrators, drop inlets, pipes, culverts, soil absorption devices and retention ponds.
3. The facility owner shall be responsible for all expenses related to the maintenance of the stormwater control measures and shall establish a means for the collection and distribution of expenses among parties for any commonly owned facilities.
4. The facility owner shall provide for the periodic inspection of the stormwater control measures, not less than once in every five year period, to determine the condition and integrity of the measures. Such inspection shall be performed by a Professional Engineer licensed by the State of New York. The inspecting engineer shall prepare and submit to the Municipality within 30 days of the inspection, a written report of the findings including recommendations for those actions necessary for the continuation of the stormwater control measures.

5. The facility owner shall not authorize, undertake or permit alteration, abandonment, modification or discontinuation of the stormwater control measures except in accordance with written approval of the Municipality.

6. The facility owner shall undertake necessary repairs and replacement of the stormwater control measures at the direction of the Municipality or in accordance with the recommendations of the inspecting engineer.

7. The facility owner shall provide to the Municipality within 30 days of the date of this agreement, a security for the maintenance and continuation of the stormwater control measures in the form of (a Bond, letter of credit, or escrow account).

8. This agreement shall be recorded in the Office of the County Clerk, County of \_\_\_\_\_ together with the deed for the common property and shall be included in the offering plan and/or prospectus approved pursuant to \_\_\_\_\_.

9. If ever the Municipality determines that the facility owner has failed to construct or maintain the stormwater control measures in accordance with the project plan or has failed to undertake the corrective action specified by the Municipality or by the inspection engineer, the Municipality is authorized to undertake such steps as reasonably necessary for the preservation, continuation or maintenance of the stormwater control measures and to affix the expenses thereof as a lien against the property.

10. This agreement effective \_\_\_\_\_

(Complete the certification in the paragraph that applies to the filing of this local law and strike out that which is not applicable.)

1. (Final adoption by local legislative body only.)

I hereby certify that the local law annexed hereto, designated as local law No. 3 of ~~19~~ 2002 of the ~~(County)(City)(Town)(Village)~~ of North Elba Town Board on September 30 ~~19~~ 2002 was duly passed by the (Name of Legislative Body) in accordance with the applicable provisions of law.

2. (Passage by local legislative body with approval, no disapproval or repassage after disapproval by the Elective Chief Executive Officer\*.)

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 19\_\_\_\_ of the (County)(City)(Town)(Village) of \_\_\_\_\_ on \_\_\_\_\_ 19\_\_\_\_, and was (approved)(not disapproved)(repassed after disapproval) by the \_\_\_\_\_ (Elective Chief Executive Officer\*) and was deemed duly adopted on \_\_\_\_\_ 19\_\_\_\_, in accordance with the applicable provisions of law.

3. (Final adoption by referendum.)

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 19\_\_\_\_ of the (County)(City)(Town)(Village) of \_\_\_\_\_ on \_\_\_\_\_ 19\_\_\_\_, and was (approved)(not disapproved)(repassed after disapproval) by the \_\_\_\_\_ (Elective Chief Executive Officer\*) on \_\_\_\_\_ 19\_\_\_\_. Such local law was submitted to the people by reason of a (mandatory)(permissive) referendum, and received the affirmative vote of a majority of the qualified electors voting thereon at the (general)(special)(annual) election held on \_\_\_\_\_ 19\_\_\_\_, in accordance with the applicable provisions of law.

4. (Subject to permissive referendum and final adoption because no valid petition was filed requesting referendum.)

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 19\_\_\_\_ of the (County)(City)(Town)(Village) of \_\_\_\_\_ on \_\_\_\_\_ 19\_\_\_\_, and was (approved)(not disapproved)(repassed after disapproval) by the \_\_\_\_\_ (Elective Chief Executive Officer\*) on \_\_\_\_\_ 19\_\_\_\_. Such local law was subject to permissive referendum and no valid petition requesting such referendum was filed as of \_\_\_\_\_ 19\_\_\_\_, in accordance with the applicable provisions of law.

\*Elective Chief Executive Officer means or includes the chief executive officer of a county elected on a county-wide basis or, if there be none, the chairman of the county legislative body, the mayor of a city or village, or the supervisor of a town where such officer is vested with the power to approve or veto local laws or ordinances.

5. (City local law concerning Charter revision proposed by petition.)


I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 19\_\_\_\_ of the City of \_\_\_\_\_ having been submitted to referendum pursuant to the provisions of section (36)(37) of the Municipal Home Rule Law, and having received the affirmative vote of a majority of the qualified electors of such city voting thereon at the (special)(general) election held on \_\_\_\_\_ 19\_\_\_\_, became operative.

6. (County local law concerning adoption of Charter.)

I hereby certify that the local law annexed hereto, designated as local law No. \_\_\_\_\_ of 19\_\_\_\_ of the County of \_\_\_\_\_, State of New York, having been submitted to the electors at the General Election of November \_\_\_\_\_ 19\_\_\_\_, pursuant to subdivisions 5 and 7 of section 33 of the Municipal Home Rule Law, and having received the affirmative vote of a majority of the qualified electors of the cities of said county as a unit and of a majority of the qualified electors of the towns of said county considered as a unit voting at said general election, became operative.

(If any other authorized form of final adoption has been followed, please provide an appropriate certification.)

I further certify that I have compared the preceding local law with the original on file in this office and that the same is a correct transcript therefrom and of the whole of such original local law, and was finally adopted in the manner indicated in paragraph \_\_\_\_\_ 1\_\_\_\_, above.

  
Clerk of the County legislative body, City, Town or Village Clerk  
or officer designated by local legislative body

(Seal)

Date: \_\_\_\_\_ October 1\_\_\_\_, 2002

(Certification to be executed by County Attorney, Corporation Counsel, Town Attorney, Village Attorney or other authorized Attorney of locality.)

STATE OF NEW YORK

COUNTY OF \_\_\_\_\_ ESSEX

I, the undersigned, hereby certify that the foregoing local law contains the correct text and that all proper proceedings have been had or taken for the enactment of the local law annexed hereto.

  
Signature \_\_\_\_\_ Timothy R. Smith

Planning/Zoning Attorney  
Title \_\_\_\_\_

COUNTY  
X City  
X Town  
X Village

of \_\_\_\_\_ North Elba

Date: \_\_\_\_\_ October 1\_\_\_\_, 2002